

Lebms

GOETHE

FAUST

h a

h a



# ZUEIGNUNG

1. a) ... zueignungs,  
 b) ...  
 c) ...  
 d) ...  
 e) ...  
 f) ...  
 g) ...  
 h) ...

i) ...  
 j) ...  
 k) ...  
 l) ...  
 m) ...  
 n) ...  
 o) ...

Schiff, v. 2019

62 m / 1, 2 m p,

100, 110, 120;

früher p,

100, 110, 120

200, 210, 220

100, 110, 120

- 100, 110, 120

100, 110, 120

- 100, 110, 120

100, 110, 120

- 100, 110, 120

100, 110, 120

- 100, 110, 120

100, 110, 120

100, 110, 120

- 6000, 10000

VORSPIEL AUF DEM THEATER

entw. undh. f. Co.

entw.:

^ u. v, ^ v - u,

z u - uo, u p u,

o t, co ^ c u p u

S u l u z u!

u o t o u p u,

o c o d - u b.

u e t u, u u p u,

- t e u u t ) ~ u.

o o p u z z u u

p u - u h u p u

u c o, o u ~ u o o l o u u;

o - u u u, u p u:

p u b ~ e u t / p u,

— 62 für 6, 10.  
0 2 4, 6, 8, 10 — 2  
— 2 4 6 8 10 ?  
e l v i m i v o z,  
c) f r d i e v l,  
— 2 4 6 8 10  
j e i n z e h t j e;  
v 2 4 6 8 10  
2 4 6 8 10  
—, 0 2 4 6 8 10  
2 4 6 8 10  
9 c a o u t s — j e i n z  
v d h —; 2 4 6 8 10

dh:

— j e i n z e h t j e,  
v 2 4 6 8 10  
s e v e c r e p s,

$e \in \sim \text{I} / \text{f. p.}$   
 $\sim, \text{b. p. / g. p.}$   
 $c \rightarrow \text{2. d.} \sim \text{L. p.}$   
 $c \text{ - L. p. } \rightarrow \text{2. p.}$   
 $\text{2. p.} \rightarrow \text{L. p.}$

$\text{D! } c \text{ - L. p. } \rightarrow \text{2. p.}$   
 $c \text{ - L. p. } \rightarrow \text{2. p.}$   
 $\text{2. p.} \rightarrow \text{L. p.}$   
 $\text{L. p.} \rightarrow \text{2. p.}$   
 $c \text{ - L. p. } \rightarrow \text{2. p.}$   
 $\text{2. p.} \rightarrow \text{L. p.}$   
 $c \text{ - L. p. } \rightarrow \text{2. p.}$   
 $\text{2. p.} \rightarrow \text{L. p.}$

$\text{f. p.}$   
 $c \text{ - L. p. } \rightarrow \text{2. p.}$   
 $\text{2. p.} \rightarrow \text{L. p.}$



and in '20/20?

~ - 6 2 - 0 ~ 2.

, next / 2 / 2 / 2 / 2

; e 2, 2, 2, 2, 2.

and / 2 / 2 / 2 / 2,

~ 1 0 / 2 0 ~ 1 2 2,

, and / 2 ~ 2 0 ~ 2,

2 ~ 2 0 / 2 2.

2 <sup>e</sup> - 2 - 2 - 2 - 2,

2 2 2, 2 ~ 2 2,

2 2, 2 2, 2 2,

2, 2 2 / 2 2 ~ 2 2.

and:

2 2 2 2!

2 2 2 / 2, 2 ~ 2 2 2.

2 2 ~ 2 2 2,

- 2, 2 2 2 2,

er 1 2' L 2' p m,

r<sup>e</sup> ~ f p m.

120 ~ 1 r ~ 120 p m,

~ ten 0) r a b c o e.

a f o l W, r u h k o l m,

- ten u p m e<sup>2</sup> 2.

w r ~ p, - w - 2' 2' p m!

9 ~ r, - 20 ~ m,

N. - p t, - N o e p l.

co 2 l, c r ~ 2 p e p l.

e l o n' - 2' p m.

h.

r b l, o p l ~ 2 o o c m!

o c l e<sup>2</sup> h n d p!

' o u m l y

; m, p l ~ 2' p m.

encl:

~ 2nd order part:

~ 2nd order part,

20 sets of  $\gamma$ , 2d.

ent, 1st order  $\gamma$ , 2d,

- 1st order  $\gamma$ , 2d,

connected,

with 1st order  $\gamma$ ,

- connected,

with 1st order  $\gamma$ .

2nd order  $\gamma$ , 1st order  $\gamma$ , 2d,

- 1st order  $\gamma$ ,

1st order  $\gamma$  - 1st order  $\gamma$

- 1st order  $\gamma$ .

connected  $\gamma$ ?

connected  $\gamma$ ?

1st order  $\gamma$ ?

2d  $\gamma$   $\gamma$ , 2d  $\gamma$   $\gamma$ .

$\vdash D^2 \text{gg}; 2 \text{ll} \sim \text{rf};$   
 $\vdash \text{de} \text{ll} \sim \text{on} \text{lo}.$   
 $\text{col} \text{ll} \sim \text{ll} \text{ll},$   
 $\text{J} \text{ll} \text{ll}; 2 \text{ll} \text{ll}!$   
 $\text{10} \text{ll}; \text{ll} \text{ll} \text{ll} \text{ll}; \text{ll} \text{ll},$   
 $\text{—} \text{ll} \text{ll} \text{ll} \text{ll} \text{ll}$   
 $\text{ll} \text{ll}; \text{ll} \text{ll} \text{ll};$   
 $\text{6} \text{ll} \text{ll}; \text{ll} \text{ll}$   
 $\text{col} \text{ll} \text{ll} \text{ll}; \text{ll} \text{ll} \text{ll}!$

ll:

$\text{ll} \text{ll} \text{ll} \text{ll} \text{ll}!$   
 $\vdash \text{ll} \text{ll} \text{ll} \text{ll} \text{ll},$   
 $\text{ll} \text{ll} \text{ll} \text{ll} \text{ll} \text{ll},$   
 $\text{ll} \text{ll} \text{ll} \text{ll} \text{ll}!$   
 $\text{ll} \text{ll} \text{ll} \text{ll} \text{ll}!$   
 $\text{ll} \text{ll} \text{ll} \text{ll} \text{ll}!$   
 $\text{ll} \text{ll} \text{ll} \text{ll} \text{ll}!$

- 20 2y, d p z h?  
c, n, ° l e o i r r,  
2 h' x e, s, p e p l,  
c e c o p r i j e r  
e o e e r n m  
c u l, b e p m z s  
w e r, e b) m d d?  
c u l l e p u j p u n c s,  
c - 2 2 n n e z h?  
c u b ~ g n j e l f d h?  
e v e r s p n d b v r?  
c y m e z n b v o h  
s i p l e 2?  
c u l l, p e r e h u m  
j n o n y e d t e r d?  
c u l l ~ p e r e m r r?  
° r y e r d, p e h h e w.

ft Co:

- Über, zu

- Ld, Stb

on - ~~sonst~~ Ld.

festen), u. b., u. b.

- D - D' u. b. h;

- über, ein - y h

richt, u. b. z y z,

- on) d, b u - u.

b s D - ~ z y u!

z h - z u - u y h!

~ h u d, l h b u d,

- c r d, e s b u d.

z u u u u d u u,

h N<sup>o</sup> - ~ b u h u y,

- ' - b h u y,

- e d h u - u y,

e u d) h e z d u

~ r p - j' l u y,  
 e o n t e o p f p e  
 o ~ r c u ) u m j' n y,  
 e t' e e q, e e l o g r t  
 ~ t e r o, c o, R z p H.  
 I z o z W, j c u - j R,  
 o m I ~ z u, t e ) R z;  
 a l l'; 2. 9 R j R;  
 ~ o e r p e n o.

h:

~ r v D, j E,  
 e r, I b R c u,  
 e r) ~ E p f l e  
 M h n s p,  
 e n e v, d e t,  
 i n g c e n I p,  
 e r, t o c e n U,

1.  $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ .

1.  $\sqrt{2}$  -  $\sqrt{2}$ :

$\sim$   $\sqrt{2}$   $\sqrt{2}$  -  $\sqrt{2}$   $\sqrt{2}$ .

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ ,

$\sqrt{2}$ ,  $\sqrt{2}$   $\sqrt{2}$ ,

$\sqrt{2}$   $\sqrt{2}$ ,  $\sqrt{2}$   $\sqrt{2}$ ,

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ !

$\sqrt{2}$   $\sqrt{2}$ :

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ ,

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ ,

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ ,

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ ,

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$ .

$\sqrt{2}$   $\sqrt{2}$   $\sqrt{2}$



24-24 fl,  
D bfl  
22.00 m fl,  
e. f. m. fl,  
- r m fl/ve.  
e. f. m. fl, o m fl,  
- ber, - 2 o m ve.

em:

cut m fl,  
b p r m o i  
2 r m fl,  
r m fl.  
co fl, f. f. m. fl?  
2 f m fl.  
w r m fl,  
- m fl, C. b.  
f. m, co m fl,

$r \sim \text{gr } \text{pr } \text{gr } \text{gr};$   
 $\sim \text{gr } \text{pr } \text{gr}!$   
 $\text{co } \text{z } \text{pr}; \text{z } \text{pr } \text{pr},$   
 $- \sim \text{pr } \text{pr } \text{pr},$   
 $\text{er } \text{pr } \text{pr}$   
 $\text{pr } \rightarrow \text{pr } \text{pr } \text{pr},$   
 $\text{pr } \text{pr } \text{pr}$   
 $- \text{pr } \text{pr}, \text{pr } \text{pr}.$

$\text{pr } \text{pr}, \text{pr } \text{pr}$   
 $\text{pr } \text{pr}, \text{pr } \text{pr};$   
 $\text{pr } \text{pr } \text{pr}$   
 $\text{pr } \text{pr} - \text{pr}.$   
 $\text{pr } \text{pr}, \text{pr } \text{pr},$   
 $\text{pr } \text{pr } \text{pr};$   
 $\text{pr } \text{pr}, \text{pr } \text{pr},$   
 $\text{pr } \text{pr} - \text{pr} \text{pr}.$   
 $- \text{pr } \text{pr} \text{pr}$

~ 2p ~ 0' 2h - e,

- 00/2 u0h zu

S 2p, d/2 e.

# PROLOG IM HIMMEL

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

1.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

1.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

1) 10' 10";  
- 10' 10"  
2) 10' 10"  
- 10' 10"  
10' 10";  
- 10' 10"  
10' 10";

10' 10";

- 10' 10"  
10' 10"; 10' 10";  
- 10' 10"  
10' 10";  
10' 10";  
10' 10";  
10' 10";  
10' 10";

je:

in den ~ nungen,

ein ~ d. ~ n,

- ~ e ~ n

~ n ~ n.

die lo:

es, ~ n, d ~ e ~ n

- h, a ~ n) ~ n,

- e ~ n ~ n,

- b ~ n ~ n.

g, ~ n ~ n,

- c ~ n ~ n;

~ n ~ n ~ n,

~ n ~ n ~ n.

~ n ~ n ~ n,

~ n ~ n ~ n.

~ n ~ n ~ n ~ n,

- consonanten.  
 ~  $\omega^{\text{st}}$ ,  $\mu$ ,  
 $\sigma$   $\rho$  /  $\sim$   $\gamma$   $\sigma$   $\rho$   $\mu$ ;  
 ~  $\mu$   $\mu$  -  $\mu$ ,  
 ~  $\mu$   $\sigma$   $\rho$   $\gamma$   $\sigma$ .  
 ~  $\gamma$   $\rho$ ,  $\mu$   $\mu$   $\mu$   $\mu$ ,  
 $\sigma$   $\mu$   $\mu$   $\mu$ ,  
 ~  $\mu$   $\mu$  -  $\mu$   $\mu$   
 -  $\sigma$   $\rho$   $\rho$   $\rho$   $\rho$ ;  
 -  $\sigma$   $\mu$   $\mu$   $\mu$ !  
 ~  $\mu$   $\mu$   $\mu$   $\mu$   $\mu$ .

~  $\mu$ :

$\sigma$   $\rho$   $\mu$   $\mu$   $\mu$ ?  
 $\mu$   $\sigma$   $\mu$   $\mu$   $\mu$ ?  
 $\mu$   $\mu$   $\mu$   $\mu$   $\mu$ ?

alg. lo.

~  $\alpha!$ ,  $\beta$ ,  $\epsilon$ ,  $\sigma$ ,  $\mu$ ,  $\gamma$ ,  $\phi$ .

~  $\eta$ ,  $\epsilon$ ,  $\rho$ ,  $\mu$ ,  $\kappa$ ,  $\nu$ ,

~  $\nu$ ,  $\mu$ ,  $\nu$ ,  $\delta$ ,  $\zeta$ .

'  $\alpha$ :

~  $\eta$ ,  $\gamma$ ,  $\sim$ ,  $\phi$ ?

alg. lo.

~  $\epsilon$ ?

'  $\alpha$ :

~  $\mu$ ,  $\nu$ !

alg. lo.

~  $\alpha!$ ,  $\epsilon$ ,  $\gamma$ ,  $\delta$ ,  $\zeta$ .

~  $\eta$ ,  $\epsilon$ ,  $\rho$ ,  $\mu$ ,  $\kappa$ ,  $\nu$ .

~  $\nu$ ,  $\mu$ ,  $\nu$ ,  $\delta$ ,  $\zeta$ ,



∴)  $\sigma \rightarrow \text{Lagrange}$   
 $\int \text{Lagrange}$   
 $- \int \text{re}$   
 $- \int \text{re}$   
 $\text{Lagrange}$

∴

$c, v, D \rightarrow \text{Lagrange}$   
 $- \int \text{re}$   
 $c, v, D, \text{Lagrange}$   
 $c, v, D, \text{Lagrange}$

∴

$c, v, D, \text{Lagrange}$   
 $c, v, D, \text{Lagrange}$   
 $\text{Lagrange}$

2:

— r, s, r, d,

— r, e, l, u,

— N, r, g — r, p.

2/3:

e, e, r, i, e, l, u

r, p, r, e, u, l, u.

r, r, b, r, v, u, l, u, r.

e, r, l, a, v, i, / 2, i

r, u, o, r, l, u.

2:

— r, s, — e, s, o!

p, r, r, b, s, o, r, l, u,

— b, r, r, e, r, b,

r, e, r, o, r, u,

— p, r, r, c, e, u, r, b:

~ 22, 20, 20, 20, 20,  
· 20 20 20 20.

22, 20:

22! → 22 - 1/2.  
v. 22 20 20.  
0, 22 20 20,  
22 20 20 20 20.  
22, 20, - 20,  
0 22, 20 20.

22:

22 20 20 20 20;  
22 20 20 20.  
22 20, 20,  
· 22 20 20 20.  
22 20 20 20 20,  
· 22 20 20 20;

221m R~ferj,  
✓ f-out-wollljhr.  
d1, R2m,  
h, j'wv' hzr!  
e'ce, e'pout-d,  
do Nitzzenfer,  
-coz jwv' jzgd,  
do' r'wv' jhr!

✓ r'zgd, j'zgd.

*df* lo. (.)

✓ j'j' o' i' ~ f m,  
- r' r', r' r' j' h.  
- i' r' r' r' r' o' m,  
- r' r' r' r' r' j' h.





# *DER TRAGÖDIE ERSTER TEIL*





# NACHT

2 2 2 2 2, 2 2 2 2 2  
6, 6 6 6 6 6 6.

6:

2 2, 2 2 2 2,  
2 2 2 - 2 2 2,  
- 2 2 2 2  
2 2 2 2, 2 2 2 2.  
2 2 2 2, 2 2 2 2!  
- 2 2 2 2 2 2;  
2 2 2 2, 2 2 2 2  
- 2 2 2 2, 2 2 2 2  
2 2, 2 2 - 2 2 - 2 2  
2 2 2 2 2 2 2 2 2 2  
- 2 2, 2 2 2 2 2 2!  
2 2 2 2 2 2 2 2.

juv, p, s, l, h,  
 e, w, ju - l, h;  
 p, l, n, o, r, l, j, l,  
 l, l, p, c, e, z, e, j, l, l, m  
 d, v, D, e, l, e, t, o,  
 v, e, v, l, ~, c, o, s, b, j, o, o,  
 v, e, v, l, ~, i, ~, l, c, o, m,  
 i, r, g, j, o, o, ~ - j, u, m.  
 D, o, c, e, r, y, j, l, e,  
 j, l, ~ - m, ~, ~, ~, d;  
 ~, ~, ~, ~, ~, ~, ~, ~!  
 e, j, ~, p, ~, ~, ~, ~,  
 ~, ~, ~, ~, ~, ~, ~, ~ - v, e  
 l, ~, p, ~, ~, ~, ~, ~;  
 e, ~, ~, ~, ~, ~, ~, ~, ~  
 j, o, n, ~, ~, ~, ~, ~, ~;  
 e, ~, ~, ~, ~, ~, ~, ~, ~  
 ~, ~, ~, ~, ~, ~, ~, ~

gesamtheit-  
-4/22222222

1. 0 1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

~ 1 - 2 2 2 2 2

~ 2 2 2 2 2

er 1 2 3 - 4 5

hoch 2 3 4 5 6 7 8 9

D! 1 2 3 4 5 6 7 8 9

2 3 4 5 6 7 8 9

2 3 4 5 6 7 8 9

5 6 7 8 9

1 2 3 4 5 6 7 8 9

2 3 4 5 6 7 8 9

0! 1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

сберзост  
кортзул!  
фортзул,  
~ортзул,  
~ортзул  
~ортзул;  
ортзул,  
ортзул,  
ортзул  
ортзул  
ортзул

-ортзул,  
ортзул?  
ортзул  
ортзул?  
ортзул,  
ортзул,  
ортзул

Dypt-ven.

Op! s! 2010 c sc!

- 9 p w<sup>o</sup> D,

In fer<sup>o</sup> in re,

er - 1/ r?

unberig d,

- c n d k b,

en, on r l e s,

off - 2 b k 2 b.

rod, e l i n o b r

2 in p h e r d:

r g d, r 2 b, n v;

x d v, c r d 2 d!

2 steps - w e f h o v n a o.

2! c d c b<sub>2</sub> q w  
s ~ u v p ~ z b  
1 b h<sub>0</sub> 2 no nor  
~ p e v p ~ d' - em m.  
a ~ z i, q f h p,  
v e n i u g u,  
e n z y z l e b u,  
- z p w o r k  
1, n l' ~ u, s o, z v p, p e n?  
u ~ z i v' ~ b!  
z p z e ~ u g u  
1, o v e ~ u ~ z o s h.  
h h m', c o' c o p l.  
"z b c l' / q o;  
e b' j, e z y' v!  
s, u, g, p e o  
1, p e z f p z z m'!"

~ yre f 2.

o eo) j r p d,

~ i h o u t - d!

o r h o u t s - r p n

- j, i e n n ✓ h!

i o e l l e n g n

S r p, r e o n,

~ n d . e . p n !

c d j j ! n d! ~ j j - !

c l o, d, p, n n?

~ h, c? r e n e o n o,

~ ~ r e - r e n,

e a, c o r (6) n n

^ E, ^ h, - r, - n d?

~ j d ( e o r - e t e f 2 o r e b.

o x out q f h s v ~!  
e, z b ~ re, b v ~ s;  
g b ~ r ~ l ~ s s,  
g p ~ o ~ s ~ s c.  
~ b ~ r ~ v ~ i ~ d ~ j ~ o ~ n,  
~ r e ~ o ~ s ~ r e ~ v ~ j ~ h ~ s,  
z g ~ r ~ v ~ d ~ z ~ p ~ p ~  
- z ~ g ~ l ~ l ~ o ~ m ~ g ~ l ~ j ~ p ~ m.  
- c ~ o ~ l ~ j ~ s ~ v ~ m  
~ r ~ e ~ u ~ t ~ o ~ n ~ l ~ m  
~ s ~ g ~ e ~ l!  
- e ~ g ~ l ~ - f ~ u ~ r ~ z ~ f ~ u  
v ~ r ~ e ~ d ~ m ~ - ~ o ~ i  
~ z ~ s ~ f ~ p ~ a ~ z  
- b ~ v ~ p ~ z!  
~ b ~ o ~ e ~ g ~ d ~ r ~ v ~ l ~ s ~ h ~ z ~ b  
s ~ e ~ u ~ d ~ l!  
z ~ l ~ c ~ o ~ z ~ r ~ z ~ p ~ v ~ b ~ l!



1 ~ 2 b

~ 2 6 ~ ) ~ 6 !

1 b ~ 2 ~ 2 y 0 ~ 2 m !

9 2 b ! 9 2 b ! ~ 2 b ~ 2 m !

~ l b e w - f l e y 2 ~ 2 b p w ~

~ H ~ ~ 2 b ~ 2 b y ~ 2 b ~

2 b :

~ 2 b ~ ?

6 : ( y o e t )

f r o p !

2 b :

9 ~ 2 b ~ 2 b ~ y ~ 2 m ,

~ 2 b ~ 2 b ~ 2 b ~ 2 m ,

~ ~ ~

4:

с! , h p!!

26:

g b, n e p j z,

z p j z n, z d j o z;

p ~ t e w o u b z,

e r d ~ m d w a h

b s a p d! c ~ o d?

c i, b, i - d z) p l

- h - z t, i z l e u

g ~, j t, ~ z b ~, z j z n?

c b e, b, o p v n n,

j ~ p z e n r l t e z

b e z, i, s z z d v w l,

z e n n e n p l,

~ b - h a c y p t a - n i



26:

g z B z z b, ~ g B b,

/v!

gci

6: (gpc)

/v?

ce?

1. b e \ 2. n!

- / ~ r. e!

- r e

- / e! r e m e z b o m

- / z g d z r p!

e x b \ p!

- / z g z g r o!

an pgh - 'stf, - s i' x. (600) f.

an:

f! 12 - 7000;  
1.6 p0 - 1000?  
2000 - 2000, 1000,  
2000 - 2000.  
10 - 1000,  
- 2000 - 2000.

f:

1, 1000 - 2000;  
2000 - 2000.

an:

1000 - 2000;  
- 1, 1000 - 2000,  
2000 - 2000, 1000,

0° 20 6 P 20 2

6:

CP/B, r CA/√m,

C-1-0'00

-2-~m

1,2p-~m

g-~m

g-~m

-6, ~m

0-~m

0, ~m

C-~m

0, ~m

C-~m

0:

~m

16-c, 20, 17x.

6:

0, ~ sen p!

- in jura!

- Hye - Suo

200nd) du!

- 6 / nd; co / on,

6nd, 6nd / 6nd?

6, ~ sen, ~ 6nd?

2nd / 2nd / 2nd,

2nd / 2nd,

2nd / 2nd / 2nd!

on:

02nd / 02nd;

- 02nd.

02nd, 02nd / 02nd,

$\partial \theta_{2n} \sim \partial \theta_{2n-1}$   
 $\sigma_{2n} \sim \sigma_{2n-1}$   
 $\rho_{2n} \sim \rho_{2n-1}$   
 $-\sigma_{2n} \sim -\sigma_{2n-1}$   
 $\omega_{2n} \sim \omega_{2n-1}$

6:

$e \sim e$ ;  $e \sim e$   
 $c \sim c$   $\sim$   $a \sim b \sim c$   
 $\rho \sim \rho$   
 $c \sim c$

an:

$\rho \sim \rho$   
 $\rho \sim \rho$   
 $\rho \sim \rho$   
 $-\rho \sim -\rho$





6:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

7:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

4: (—)

o<sup>2</sup> r l e z h y g e i,

\ m l z e r z e n d,

z m i n e D y z z e d,

- l s ; c . m e m b e r !!

e r l - 2 u p p e r,

c z b b v m , u m ?

e D l e n e u , e,

z m o l e n r o m .

e s t o v s - g l e s ,

, v , e z f f e n - t .

D l , g y z a - v o l o ,

e , v l s j o g e n t .

, m e l - z n , e ) z

z y s p e n t z g e d e n c o ,

o b r o z z e n y - m y ,

- ufl ~ ro;  
 , u s h, o k u l l  
 g p i e n i a , j l o  
 - , j l e , z m u , j p o  
 j n y e r a , o r o k o s o !  
 ~ e n e t i o r a p l l .

/ e d i o , j z h v r o ;  
 o , i i , l l o p p i e o ;  
 - i , d j z t n l l .  
 j h r o m n e r  
 i b t p \_ m , - l o ;  
 e j o b z e r p ,  
 o j o r u g e o .  
 a n s i v i e o , z e r i  
 o , p h h r e r i  
 D i t m b , y s i e r ,  
 b n i o n o n .

2206, co D' 269m,  
en/ m he - he gl) ~;  
crj 20 d, p m,  
en 26 eio h - a.  
15 e m m, 20 p  
y m 2 2 p p.

clab) o d 2 m b  
- 2 h y j o n e ,  
- i ~ m m 2 p m  
c r s r p j f e j .  
1, o r b 2 p h z p,  
e d o m s b p r z p,  
c r d o) - f v d - s;  
b e l) f a l ~ z r o m j,  
b u s 2 - 2 l, o c r - r e y m,  
o l z, c o, e d - r;  
g u d ~ r, c o / r,

- coe ~ d, e r b e g a u ~

~ r m ~ 1, 1, 1 d. - d;

2 a ~ r ~ 1, ~ g e d,

~ 1, 1) R g ~ r e d,

o o e h ~ 1 - d d.

· - / g, c o r ~ r o e

e r e l l h ~ r ~

Le, ~ 2 h e l l h r e

z r ~ r e l l h r e

r o, l e r, c o r l l

o, l ~ 2 h e l l h r e,

e r, r g e) / d,

e r - e r ~ r m p o r ? m

c o h o b e r, z ~ r e, r ?

o e e r, o r o, ~ d o m

~ h n p l - i e r, z,

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

2. 11. 19, 19. 11.

1. 11. 19, 19. 11.

→ cōnvergēt, e n n t.

∂ c r d l l ) z u w s t g e t

! l o g e t e t ~ n ~ m t

c r ' v s ~ r o t z u s

o c r ~ b n c e s r e s y r e t

1 w d , e n p l e ,

1 1 2 d n a b e !

z e i n g e t - n d .

e n t h ' z e n g e t ,

e g e n l e h e n t ,

x o e r b e z d !

1 0 2 d , - ' z y p e t ,

1 6 0 d , e f u ' p e t ,

o 2 b l y f r u n d - d .

1 0 2 2 u ' , 2 0 p o ,

1 p l e , s y j z u b o ,



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Handwritten text, possibly a name or title.

Handwritten text, possibly a name or title.

2000) 2/1000,

- 2/1000/1000.

~ 2000, ~ 1000 ~ 1000!

2000 1000

~ 1000/1000!

2000 1000 1000,

1000 2000,

1000 2000.

1000 2000 1000,

1000 2000 1000 1000,

1000 2000 1000,

1000 2000 1000.

1000 2000 1000 1000,

1000 2000 1000 1000.

1000 2000 1000 1000;

1000 2000 1000 1000.

~ 1000, ~ 1000,

if  $L \sim \dots$ ,  $2 \times \dots$ ,  
obese  $b^2$   $2 \times \dots$   $10!$   
 $\sim$  of  $1 \times \dots \sim \dots$

$2 \times \dots - 2 \times \dots$

$2 \times \dots$ :

$2 \times \dots$ !

$2 \times \dots$

$\sim$ ,  $2 \times \dots$

$2 \times \dots$ ,  $2 \times \dots$

$2 \times \dots$

$6$ :

$2 \times \dots$ ,  $2 \times \dots$

$2 \times \dots$   $2 \times \dots$   $2 \times \dots$ ?

$2 \times \dots$   $2 \times \dots$

$2 \times \dots$   $2 \times \dots$ ?

^ 2 v, 0 \sqrt{r} \sim L \delta \rho, \\ \sim d, 2 k o \sim l, S n e h u n n, \\ \rho \sim r \sim u v e ?

2: cu:

2 g p u  
u r r p d,  
r o L u  
u r 2 p d;  
P - u e n  
  
u r p e r,  
D! - r b e n  
n b / u a.

2: n:

n b: y e n!  
o r \ u e,  
\, u e,

2. a - 10

th, ycu.

6:

co. q. 1, v. 10 - 10,

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

кв, рсе - о зр,  
- лсе о л  
б, в - д р.  
р, л - к р з р,  
- б л л о з;  
н, з л р, л р л,  
л р, н л р.  
- л л, л о з р!  
л л, л р л!

л л:

л л

л л

л л

л л

л л

л л:

л л

2 r j e e

p, i, o

g l e j r k i

D i r u e n,

z b, e r!

2 i n:

n b i g e n,

e i c o g z o.

s o i v e n

L o n j o d!

m r L o e n,

k u e n,

l e n g e n,

l o n e n,

e n s t e n

j i r e n,

j i e n!





# VOR DEM TOR

gymnastik 20.

~ ~~rechner~~ f:

crer / 20<sup>2</sup>

i:

12206 / 20

1.8:

12 → D' von

~ ~~rechner~~ f:

118, 12<sup>2</sup> / 20<sup>2</sup>

f:

118.2 / 20

1. f:

colleg?

~ et:

122 ~ h.

W:

Du... ..

1. 2. 3. 4. 5.

- 2. 3. 4. 5.

ell:

1. 2. 3. 4.

1. 2. 3. 4. 5.

1. 2. 3. 4. 5.

ordrel:

1. 2. 3. 4. 5.

i:

überprüfen

h:

einmal

überprüfen

überprüfen

überprüfen!

i:

überprüfen

überprüfen

h:

überprüfen!

überprüfen

überprüfen

überprüfen

unred:

es v<sup>u</sup>, zu n<sup>u</sup>!

- es - p:

pf  $\sqrt{b_1}$  er b<sup>2</sup>,

- h<sup>2</sup> r<sup>2</sup> r<sup>2</sup> D!

f zu: (y<sup>2</sup>)

1 - p<sup>2</sup> e<sup>2</sup> r<sup>2</sup> n<sup>2</sup> f,

b<sup>2</sup> n<sup>2</sup> r<sup>2</sup> n<sup>2</sup>,

'<sup>2</sup> r<sup>2</sup> n<sup>2</sup> a;

1 v<sup>2</sup> r<sup>2</sup> o<sup>2</sup> p<sup>2</sup> n.

b<sup>2</sup> n<sup>2</sup> p<sup>2</sup> n<sup>2</sup>

- n<sup>2</sup> r<sup>2</sup> n<sup>2</sup> r<sup>2</sup>.

f:

n<sup>2</sup> r<sup>2</sup>, n<sup>2</sup> 1 v<sup>2</sup> / n<sup>2</sup> p<sup>2</sup>.

p<sup>2</sup> e<sup>2</sup> r<sup>2</sup> e<sup>2</sup> d<sup>2</sup> / n<sup>2</sup>.

1 r<sup>2</sup>, 1 v<sup>2</sup> n<sup>2</sup> w<sup>2</sup> b<sup>2</sup>

omparabon.

un:

~; flv; ~zurb!

~; es; ~ me.

- l. ge co her?

~ l. ngr?

ph<sup>o</sup>ur s<sup>m</sup>,

- feru s t s.

un: (6)

~zurb, ~zurb,

- cyf - ur,

~; ~; ~;

- s - ver ~!

bx pl no ~!

~; ~; ~;

~ n, ~ rpl ~;

l'v ~ m'n.

i' m'n:

1000, v ~ o ~ - l' m'n

o ~ p' s' n' - n' f,

c' s', c', z' m',

l' m' n' s' p' n'.

u' p' n' l' s', h' o' r' h' o

- o' ~ l' o' z' u', u' g' l' z' ;

u' n' u' v' o' l' s' p' z',

- o' n' l' l' - l' e' g' z'.

o' m' m'n:

u' n' s', h' - o' p' o' p' p' i:

o' z' u', n' l' p' s',

u' o' l' l' s' n' i;

o' ~ j' z' u' p' i' s' s'.

$\mathcal{L}: (y \sim \text{wandel})$

$\rightarrow ! \alpha \beta ! e \gamma \sim \text{L} \text{L} !$   
 $\alpha^{\circ} \beta / z \rightarrow \text{sh} ? \text{m}$   
 $\rightarrow | - \text{f} \beta ! - \text{z} \beta !$   
 $- \text{co} \cap \text{co} \beta, e \beta, c, \beta \text{gl.}$

wandel:

$m, \beta, \gamma, \alpha, \beta, \gamma,$   
 $z \beta \text{L} \text{L} \beta / m;$   
 $\alpha \beta \beta \gamma, z \alpha \beta \text{co} \beta \text{L}$   
 $\sim \text{all} \beta \text{L} \text{L} \text{L} \text{L}$

$\mathcal{L}:$

$\alpha \beta \gamma \beta \alpha \beta \gamma;$   
 $\alpha \beta \gamma, z \text{L} \text{L} \text{L} \text{L};$   
 $\alpha \beta \gamma, \beta \alpha \gamma,$   
 $\sim \alpha \beta, \text{L} \text{L} \text{L}.$

o-llh:

u-m-l-z-z

z-u-j-u,

z-h-l-f-j

z-u-o-u

z-l-j-u!

n-i-e-r,

n-i-u!

-i-l-e

o-i-c-h,

o-j-l-e,

-j-l-h.

e-i-j-u!

e-i-u!

z-h-u-m

z-o-j-u.

n-i-e-r,



2.1.1

- 1.0.1

2.1.1

6-10

6:

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

1.0.1 2.1.1

0-6-69 P. 10

0-6-69 29 d.

0-6-69, 1-2-22

0-6-69 22.

0-6-69 22

0-6-69 22.

0-6-69 22 - m.

0-6-69, 1-2-22, 0-6-69,

0-6-69 22 29 d.

0-6-69 22 29 d.

0-6-69 22 29 d.

0-6-69 22 29 d.

0-6-69 22 29 d.

0-6-69 22 29 d.

0-6-69 22 29 d.

0-6-69, 1-2-22, 0-6-69,

0-6-69 22 29 d.

0-6-69 22 29 d.

— ude für die uet,  
— 4000er  
dud) r f m.  
65° w o l u n t e  
w o n s t h e r e n.  
12 v j ° e b p,  
x ° L o o c u r d,  
f u r d y l o - m:  
x v 12, x e l t o n!

en:

2 /, x e, j g m  
i n - i p;  
d x' 1 e v o m,  
c 1 n h e l e r s v.  
e l l e n, f u, r e p h  
v ~ u o b n;  
6 u o s l o r v p h

- mólē. mólē.

unl' rē.

ly - p.

z h G ) / h,

z L h, ve - r h,

z a - r h.

z r, r a - r,

- z h / z L.

h! h!

h o! z o! z!

- r - l a r.

- r t z b ) z,

e r p - r - r h r

z o r - r h;

, h o r r t, ) z

- d' : ~, e l' e, e!

h! h!

h o! z o! z!

- e / - d' n!

o z - p z' ~ o z';

o h f v b, o h f ~ o;

- e ~ v b n.

o h ~ v, o h ~ v n

- ~ n n e n z n,

h! h!

h o! z o! z!

- d' ~ n n.

- y v o / - h!

o n h o / o h

~ n - d' n!

z / d' b o v o,

-f\re z - c:

b! b!

b o! z o! z!

f - l e n

♪ 4:

x e, e z n s,

e r s z z l g,

- l o o L o p p,

o ~ - z p d, n.

- ~ u d ~ z d ~ n,

~ r z b p L p d,

1 b ~ j - o f s,

e, l ~ ~ a b s g d:

1 p L b, 1, 2,

~ ~ n p d.

4:

12 ~ 1200

12' 12-12-12

e(12) 1200

4:

12, 1200

12, 1200;

12, 1200

12, 1200!

12, 1200

12, 1200

12, 1200,

12, 1200.

12, 1200, 1200,

12, 1200,

12, 1200,

1. u. v. / p. 20,  
y. e. r. t. z. t. l. u. i.  
2. z. h. z. d. z. h. e. u.

2:

100<sup>2</sup> u. v. u.  
e. i. r. z. h. n!

6:

— l. r. e. n. g. p. d.,  
z. h. n. — z. h. z. d.

— n. r. o. n. n. c. ✓

11:

d. — b. r. e. s. — l. o. u.  
v. — y. r. n. z!  
— n. ; a. l. o. n. n.



9 ~ u p n!  
~ l u j t o r n e r,  
~ l e h - e n - d,  
~ l e g t; u p c.  
e r b, z u s p r o b,  
~ l e b e n z, z s;  
- e l l, - l f), m,  
o n n e l u o.

6:

~ e l f 2 s j l e g,  
x ~ i s i o e j b.  
x o o, l e n n e n  
- e l p r u n - l b.  
~ e h y, R z l b,  
z l u, o g, x e n  
d, e r e l u b  
l e n o s t o j g n.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

2 a, yu, 1 Cont ju,

- recht: a po?

— 2 1 2 2 . ju ju

2 ju ju, ju ju

✓ ju o, Co pd.

1 2 6 ~ ju ~ ju mi:

6 Cont 2, 1 2 ju,

er, ju ju d.

mi:

o ~ 1 ~ ju ju!

4 1 ~ ju ju,

1 2 d, 1 2 ju ju,

po<sup>o</sup> - Cont ju?

ce, o ~ ju ju d,

— ju ju ju;

ce, o ~ ju ju,

— ju ju ju ju ju.

4:

—  $m, a, 2, 2, h, n,$   
 $\circ, r, 2, \circ, N^{\circ}, g, M, i!$   
 $con / c, o, e, m, U, m,$   
 $- con c, o, n, n / U, i$   
 $\partial, o, J, r, f, e, z, o, y$   
 $p, 2, h, o, / \sim, m, i!$   
 $M, a, z, w, o, \sim, z, y$   
 $i, h, y, m, i, n, z, h, y, m, i.$   
 $b, v, t - \mathcal{A}, i, n, s, e, d,$   
 $e, v, t - b, 2 - l, e, t, \sim, s, o, m, e.$   
 $- e, m, b, r, o, p, s, i, e, n, t$   
 $r, n, d - m, n, d, j, f, u, r!$   
 $\sim, o, s, i, r, d, u, w, e, f,$   
 $i, f, e, d, j, z, m, b, o,$   
 $y, f, e, z, z, i, w, s, t, h, e, o, t,$   
 $\sim, b, r, o, z, z, e, n, f, u, r, b, o.$   
 $l, a, t, e, \sim, z, m, a, s, h, l$



~ r d ~ 2 r p.

an:

1 2 6 0 2 2 2 2 2

0 2 2 2 2 2 2 2 2

2 0 1 2 2 2 2 2 2

0 2 2 2 2 2 2 2 2

0 2 2 2 2 2 2 2 2

1 0 1 0, 1 2 1 2 1

0 2 2 2 2 2 2 2 2

~ 0 2 2 2 2 2 2 2 2

- 0 2 2 2 2 2 2 2 2

- 0 2 2 2 2 2 2 2 2

U:

0 2 2 2 2 2 2 2 2

~ 0 2 2 2 2 2 2 2 2

0 2 2 2 2 2 2 2 2

1. — ) S' h h i;  
 1. — 2, 2 e h h o b,  
 ) ~ d r n e r ~ m i;  
 1. i' d p' a' ) S e b  
 ) ~ b e r z z a n.  
 — n - z b i d,  
 1. j r - z o r g e a  
 — f u r o' z e i n e l l  
 — b' d o r j ~ n o, u' p' u!  
 h, e r ~ p u l z,  
 — n. d. z h e r e!  
 v d. z i n b' p e r,  
 l e z ~ n e r d o.

o m i:

u l l, e n t z,  
 1. f r e ) R e d r o s t,  
 2. u g e w e l t' h,

Sen 2, 4.

Sen 2, 4, 2, 4

Sen 2, 4, 2, 4, 2, 4

Sen 2, 4, 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4, 2, 4

Sen 2, 4, 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4, 2, 4,

Sen 2, 4, 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4,

Sen 2, 4, 2, 4,



Q:

bezug zur 2010-11-11?

an:

100000 / 1000000

Q:

Mr. Sulzberger?

an:

100000000

10000000000

Q:

1000000000000

10000000000000

100000000000000

1000000000000000

an:

10210 ~ 226i  
- 11111 ~ 226i.

6:

10210, e, 11111  
11111 ~ 226i.

an:

102100 - 1111111111  
e, 1111111111, 1111111111.

6:

10210, 1111111111

an:

10210 ~ 226i  
1111111111, 1111111111

∪ ccl. ∅ ∅ ccl.

Q:

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z}$

an:

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z}$

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z}$

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z} \setminus \mathbb{Z}$

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z}$

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z}$

Q:

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z} \setminus \mathbb{Z}$

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z} \setminus \mathbb{Z}$

an:

$\mathbb{R} \setminus \mathbb{Q} \setminus \mathbb{Z} \setminus \mathbb{Z}$

16 - 20 p. n.  
L, e 2 d. v. n. - n,  
i. f. e. h. o. n.

6 m. 2 e. f. e. t.

# STUDIENZIMMER

42<sup>2</sup> C<sub>2</sub> h.c.

4:

$\psi, \psi^c, \psi^c$   
1.  $\psi^c \psi^c$   
2.  $\psi^c \psi^c$   
3.  $\psi^c \psi^c$   
4.  $\psi^c \psi^c$   
5.  $\psi^c \psi^c$   
6.  $\psi^c \psi^c$   
7.  $\psi^c \psi^c$   
8.  $\psi^c \psi^c$

$\psi, \psi^c \sim 1/2 - \epsilon!$   
 $\sim \psi^c \psi^c \psi^c \psi^c$   
 $\psi^c \psi^c \sim \psi^c$   
 $\psi^c \psi^c \sim \psi^c$

$\sigma_1, \sigma_2, \sigma_3^2$  with  $\sigma_1$   
 $\rho_{11} = \rho_{11} = \sigma_1^2$ ,  
 $\rho_{12} = \rho_{21} = \sigma_1 \sigma_2$ ,  
 $\rho_{22} = \sigma_2^2$ .

$D_{12} = \sigma_1 \sigma_2$   
 $\rho_{12} = \rho_{21} = \sigma_1 \sigma_2$ ,  
 $\rho_{11} = \sigma_1^2$ ,  
 $\rho_{22} = \sigma_2^2$ .  
with  $\rho_{11} = \sigma_1^2$ ,  
 $\rho_{12} = \sigma_1 \sigma_2$ ,  
 $\rho_{22} = \sigma_2^2$ ,  
 $\rho_{11} = \sigma_1^2$ ,  
 $\rho_{12} = \sigma_1 \sigma_2$ ,  
 $\rho_{22} = \sigma_2^2$ .

$\rho_{11} = \sigma_1^2$ ,  $\rho_{12} = \sigma_1 \sigma_2$ ,  
 $\rho_{21} = \sigma_1 \sigma_2$ ,  
 $\rho_{22} = \sigma_2^2$ .  
 $\rho_{11} = \sigma_1^2$ ,  $\rho_{12} = \sigma_1 \sigma_2$ ,  
 $\rho_{21} = \sigma_1 \sigma_2$ ,  
 $\rho_{22} = \sigma_2^2$ .

co b / yu,  
eb  $\sim^2$  zu - zu,  
em  $\sim$  ligu; un:  
 $\rightarrow$  -  $\sim^2$  ob, unni?

u D! j b,  $\sim^2$  b -  
u b / u  $\sim^2$  b b.  
u cu  $\sim^2$  f r - u b,  
- r e r a - b m?  
eb, f b,  
eb u b) yu,  
r u e s t yu,  
r o u s D h y,  
r u r e d e n - z u l  
o  $\sim^2$  z y u l.  
v e r,  $\sim$  b e s s e r,  
z e r b e  
e z  $\sim$  r e

22 f' d/ s h,

z h ~ L u s - g l ) ~

f u g i : » P e n t r a e e t ! «

x f u g i : a z z l v c P i

i n e e t - z ) P e n t r a g g i,

120 - 4 50 f u,

c i s z b h u u v.

f u g i : P e n t r a i s.

u e r c i s f u,

e e l e r ) / s !

• i s ; - z o o n t - g l i ?

- f u g i : P e n t r a i n t !

e, D n 1 90 f u,

z e n t v c o, e i a t e r.

v z l l - z b ! s ~ z o s i v

- z e f t : P e n t r a i n t !



° 20 e p u l e n ,

6 e - o e 2 n ,

- o e l e n !

9 ~ f v e p u

n i / i ~ s e l e .

~ s t e l e

20 , f u 2 e .

p u n e r o l l s ,

i n i t e , o l e n d .

n c o r o 1 o 2 !

n e ~ m p p e ?

~ p u ? b o n e ?

o ' 2 e 6 e n - l !

~ 2 d ) 2 p l ,

e / ~ o 2 e o p !

c d ~ p d U 1 1 0 2 !

2 d . o ~ n l e e ,

2 l e n n , f u a p o .

—! e b v p o!

l 2 2 u 2 u b 1

• o z u o z o z u

2 b : (s<sup>2</sup> n)

o u b i i !

u u 2 o, l r p n !

o r o b o

p t ~ d 2 u b o

u u l l

z u 2, z u E,

s - r,

- , o ) o p l l

l r p n p,

b r / o p !

e u u t e u

z b / p e u

4:

$\frac{1}{2} \mu m^2 v$ ,

$\frac{1}{2} \mu \sim \beta \cdot h$ :

$\circ \nu \nu \circ \nu$ ,

$\sim \nu \nu \nu$ ,

$\circ \nu \nu \nu$ ,

$\sim \nu \nu \nu$ .

$\nu \nu \nu$

$\nu \nu \nu$ ,

$\nu \nu \nu$

$\sim \nu \nu$ ,

$\nu \nu \nu \nu$

$\nu \nu \nu$ .

$\nu \nu \nu \nu$ ,

$\circ \nu \nu$ !

$\nu \nu \nu \nu$ ,



'gfgm!

ggf-srllm.

choco!

ngro!

~sfom,

efh,

r-rpom,

Whgh!

d~hpl,

gf-onld

~rprbl~

-jrblo.

gr/jerz!

rdj°rblo!

gb,e/mes.

rorpzmz!

sch!

erschreiß!

sch!

igub! zünd!

die hoch, nicht, person, was, z. g. o,  
2<sup>2</sup> h a.

die lo.

cy in die, co, g<sup>2</sup> zünd, erd?

lf:

es - a<sup>o</sup> l<sub>0</sub> m!

~ l<sub>0</sub> o - f! - noo d d d.

die lo.

100 ~ g<sup>2</sup> zünd!

100 d d d.

4:

and  $g$  is

alg. loc.

is given by

$l_i = e_i - \alpha_i M_i$ ,

$i = 1, \dots, n$ ,

$\alpha_i = \frac{1}{M_i}$ .

4:

$l_i = e_i - \alpha_i M_i$ ,

$i = 1, \dots, n$ ,

$\alpha_i = \frac{1}{M_i}$ ,

$M_i = \frac{1}{\alpha_i}$ ,  $i = 1, \dots, n$ .

$\alpha_i = \frac{1}{M_i}$ .

alg. loc.

$l_i = e_i - \alpha_i M_i$ ,

1.  $g \in L \rightarrow -g \in L$ .

Q:

co. 2.  $g \in L \rightarrow g \in L$ ?

U:  $L$ .

1.  $v \in L, g \in L$ !

-  $e \in L, e \in L, \text{co. } g \in L$ ,

$\cdot \text{cl}, e \in L, v \in L$ ;

$e \in L, e \in L$ .

-  $e \in L, \text{co. } g \in L$ ,

$g \in L, v \in L, e \in L$ ,

$v \in L$ .

Q:

$g \in L \rightarrow -g \in L$ ;  $-g \in L \rightarrow g \in L$ ?



2/3 lo:

g' e' c' p, v.

c) ' r' p, i' m' n' d

f' u' l' ~ r' p' o' d' m

i' v' ~ l' o' l' o', i' l' l' e' o' c' a

~ l' b' o' t' ^ o', i' j' e' l' p' u

e' g' g' l' e' m' i' z' u' l' l

~ t' r' u', ~ r' i' f' u' l' l

- d' i' p' l' o' m' a, i' s' t' r' u' k' t' u' r

l' l' e' ~ r' u' d' e' r' l' e' s' t' u' d' i' u' m

I' n' d' e' r' f' u' r' i' e' n' d' e' r' l' e' s' t' u' d' i' u' m

~ r' u' d' e' r' l' e' s' t' u' d' i' u' m

~ r' u' d' e' r' l' e' s' t' u' d' i' u' m

~ r' u' d' e' r' l' e' s' t' u' d' i' u' m

4:

~ r' u' d' e' r' l' e' s' t' u' d' i' u' m

~ r' u' d' e' r' l' e' s' t' u' d' i' u' m





12 f/d m m  
w ~ v, o g v.  
x · e l d, x, n,  
~ d h i o d p o.

u f l o:

p p o → ! e, z o g v,  
u v ~ m o d e n o,  
' e l o s ~ j u m

u:

e l u h s d e r l u  
/ a v, g o ~ 2 u,  
c e d w, a n d e g e n 2?  
o o e ~ 2 2 b d n?

u f l o:

u s - d u - / y p n:

— an; Dof,  
; a g b, ~ w l h.

U:

e: f e y f h!  
— z p i n c h e g?  
e: f h p i!

U: lo.

— G e r n t 9, o, 2 y f h,  
1, 2 o f f e o:  
— L e r / o 2 2.

U:

e: a r z b e y / o l h d?

U: lo.

— i: ~ p j \ L - f d:

$c_2 \rho^2, e^{\sigma} c_2$

$e^{\sigma} \rho^2, \rho^2 \sim \rho^2$

Q:

$c_2 \rho^2 \sim \rho^2$

$e^{\sigma} c_2, e^{\sigma} \rho^2 \sim \rho^2$

-  $c_2, \rho^2, \rho^2, \rho^2$

Q:

$c_2 \rho^2, e^{\sigma} c_2 \sim \rho^2$

$e^{\sigma} \rho^2 \sim \rho^2$

$c_2 \rho^2 \sim \rho^2$

-  $c_2 \rho^2$

$c_2 \rho^2, \rho^2 \sim \rho^2$

$c_2 \rho^2 \sim \rho^2$

Q:

$c_2 \rho^2 \sim \rho^2$

20 12 22 / 20.

df lo.

ff 0 v d. 1 n r u e x;

er d e y n D W h.

6:

12 e / 2 ff,

be y d b n m m.

~ 2 2 2, a ~ 2!

1 n / 2 e y f r h.

df lo.

c e e u, — v, D W,

e / p / x / u;

d 2 u n e, e, f

r 2 n d c o p, h.

4:

10 - m, e g r e l;

→ e, n d f u r !

2/3 lo:

g', 2 k o l e o n

2 9 f e u p u

o z h o n .

o o r, j u r b o n ;

1, 2 u b e r, 1, 6 b u r ;

2/1 ~ r o p u f .

D e n p' ) s y,

e' e e n u p,

- e n g l ) e b .

w s b a - l u,

w a n z, b u n !



26:

ge<sup>1</sup>, 1<sup>er</sup>

ed<sup>2</sup> 1<sup>er</sup>!

ge<sup>2</sup>

le<sup>1</sup> 1<sup>er</sup>

1<sup>2</sup>!

en, 1<sup>er</sup>

en 1<sup>er</sup>!

ge<sup>1</sup> 1<sup>er</sup>

er 1<sup>er</sup>

ge<sup>1</sup>

er 1<sup>er</sup>

26<sup>2</sup> 1<sup>er</sup>

ge<sup>1</sup> 1<sup>er</sup>

ge<sup>1</sup> 1<sup>er</sup>

er 1<sup>er</sup>

en 1<sup>er</sup>;

- 1<sup>er</sup>

lwe ve

en, se,

en, a,

c) b m,

h, p m,

se m.

u u!

f b m!

b h

g f n u t

ve n t,

g f n h

z ve c,

son p m,

e f,

o, z z

z) m,

u you

$\int_0^{\infty} r^2$

$h(r) dr$

$-e/r^2$

$g(r) = C_1 r^{-1}$

$h(r) = C_2 r^{-2}$

$h(r) \sim 2/r^2$

$r \sim 1/r$

$1/r \sim C_1 r^{-1}$

$2/r^2 \sim C_2 r^{-2}$

$C_1 = 2/r^2$

$h(r) = 2/r^2$

$r \sim 1/r$

$h(r) = 2/r^2$

$1/r \sim C_1 r^{-1}$

$-e/r^2$

$h(r) = 2/r^2$

$r, 2/r^2$

$r \sim 1/r$

8, 00,

12 ju;

1/10,

1/10

100 ju,

100 20

100 100.

100! — 10, 100 ju!

100 100!

100 100 100

100 100 100!

100 100 100,

100 100 100;

100 100 100,

100 100.

100 100,

100 100 100.

\ 2 \ 4 - \ 2 6,

\ 6 8, 1 2, 3 4, 5 6

1 2 3, 4 5 6 7 8

- 9 10 11 12,

→ 13 14 15 16 17 18

19 20 21 22 23 24!

→ 25 26 27, 28, 29 30,

31 32 33 34 35.

36 37, 38 39 40

41, 42, 43, 44, 45 46.

6: (100)

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18

19 20 21 22 23 24 25 26

27 28 29 30 31 32

# STUDIENZIMMER

4. dfg. lo.

4:

-  $2! \cdot 2! \cdot 2! \cdot 2! \cdot 2! \cdot 2! \cdot 2! \cdot 2!$

dfg. lo.

100.

4:

2!

dfg. lo.

426 - 2000.

4:

200!

2/3 lo:

— fud ev.

1<sup>c</sup>, 2<sup>b</sup>, 3<sup>a</sup> m;

er a, ber j m,

v, 10 er l m,

2 n, 2 ab d<sup>2</sup> ne,

er ab j g m e,

1, 2 n l s<sup>2</sup> m,

2 r m, g m,

— s m e, v j<sup>-</sup> m,

s h s h e g m;

er e, g v e l,

h b, c o e m.

6:

2 ter ne e<sup>c</sup>, c, c

o m r e s o b.

1 v j d, 2 j g m;

1. 2 → 10  
con, d v c p m?  
m° e! m!  
e° d p,  
2er, m n,  
~ 2 2 p d m,  
2 2 o t e g e b.  
→ 2 2 p d, 2 2 2 2 2,  
2 2 d l m c,  
~ n / 2 i, v 2 o d  
1 c y b e r, 1,  
b i n g t e r  
2 2 2 m n v e l,  
2 2 2 2 m l  
2 2 2 2 2 2 2.  
D 2 2, c, 2 l) 2 2,  
D 2 2 2 2 2 f u i,  
D 2 2 2 2 2 2,



De la fin.

21, v. p. l. c. l.,

~ h. r. r. s. i.

~ s. e. r. r. l. l.,

~ r. d. o. i. u. s. i.

~ v. e. e. s. b.,

~ l. e. c. t. e. r. v. s. b.

df. lo.

~ d. i. l. e. n. t. i. u. s. b.

6:

~ s. d. i. l. p. o. r. t.

~ m. e. n. t. i. s. p. e. l.

~ d. y. a. b. e. l. y.

~ s. o. r. d. e. n. t. i. a.

~ c. r. i. s. t. i. a. n. a.

~ p. r. i. n. c. i. p. i. a.

df lo:

- d h e ~ h o d l,  
~ h e n d, / e p h i:

U:

e p m, z i; e f.

df lo:

e b v r 1; d f . v u b.

U:

c o 2 j m p

~ o u n t l e p f,

~ b l r e p f

2 m e l s y d s,

— d 1 e r, c o 1 o

2 m = - 2 c m r p f,

- b 2 4 1/2 e

zwe-z-zoll w!  
 M, 2, 2, 2, 2  
 c, 2, 6, 6, 6, 6!  
 M, 2, 2, 2, 2, 2,  
 1, 2, 2, 2, 2!  
 M, 2, 2, 2, 2, 2, 2  
 2, 2, 2, 2, 2, 2!  
 M, 2, 2, 2, 2, 2, 2,  
 2, 2, 2, 2, 2, 2, 2!  
 M, 2, 2, 2, 2, 2, 2  
 2, 2, 2, 2, 2, 2,  
 c, 2, 2, 2, 2, 2, 2  
 2, 2, 2, 2, 2, 2!  
 M, 2, 2, 2, 2, 2, 2!  
 M, 2, 2, 2, 2, 2, 2!  
 M, 2, 2, 2, 2, 2, 2!  
 - M, 2, 2, 2, 2, 2!

26, 2: (flur)

os! os!

g 26 ff ✓

1, 2 ~ d,

2 20m 6;

6 gff, 6 flur!

~ 202 10 6 gff!

rh

1, 10 ~ 10 / 20,

- m

8, 1 ~ 10 gff.

20m

1000,

20m

4 6 E,

2 2 6 4 6 5!

~ 2 2 2 2

m,

2206,

—  $\rightarrow$   $\mathcal{L}$

Lines!

2/3 lo.

9<sup>2</sup>,  $\sim$

$\int \sim 2$ .

2, 0/6 -  $\mathcal{L}$

shy 6  $\mathcal{L}$ !

2, 0/6,

0 -  $\mathcal{L}$

com -  $\mathcal{L}$   $\mathcal{L}$

—  $\mathcal{L}$   $\mathcal{L}$ .

2, 5, 2  $\mathcal{L}$   $\mathcal{L}$   $\mathcal{L}$ ;

; 0 -  $\mathcal{L}$ , 0  $\mathcal{L}$   $\mathcal{L}$ ;

,  $\mathcal{L}$   $\mathcal{L}$   $\mathcal{L}$   $\mathcal{L}$ ;

ee -  $\mathcal{L}$   $\mathcal{L}$   $\mathcal{L}$   $\mathcal{L}$ .

2 - 1/2

2/3

1/2 ~ 2/3

2 - 1/2

2/3

1/2 ~ 2/3

2/3

1/2 ~ 2/3

2 - 1/2

1/2 ~ 2/3

2/3

2 - 1/2

2/3

2 - 1/2







0 2 4 6 8, 10 12, 2  
4 6 8 10 12, 14 16,  
18 20 22, 24 26 28,  
30 32 34 36,  
38 40, 42 44  
46 48 50 52 54 56,  
58 60 62,  
64 66 68, 70  
72 74 76, 78 80 82,  
84 86 88 90!

100

102 104 106,  
108 110 112,  
114 116 118 120,  
122 124 126 128,  
130 132 134 136,  
138 140 142 144.



erwischen,   
 erbehold,   
 1. 2. 3. 4. 5.   
 1. 2. 3. 4. 5.

2. 3. 4. 5.

1. 2. 3. 4. 5.

6.

1. 2. 3. 4. 5.

1. 2. 3. 4. 5.

1. 2. 3. 4. 5.

1. 2. 3. 4. 5.

2. 3. 4. 5.

1. 2. 3. 4. 5.

1. 2. 3. 4. 5.

1. 2. 3. 4. 5.

U, V ~ A, f ~ e.

6:

Dcoffiolletes, Cest?

29, 2000, 1200, 1200?

2/1, 2, 2, 2, 2, 2, 2, 2

500, 2, 2, 2, 2, 2?

bl, d, 2, 2, 2, 2,

- 2, 2 ~ 2, 2, 2?

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

2, 2, 2, 2, 2, 2,

y, w, Am, Ar?  
o, r, k, r, o, la, ju?  
in te col.

uf lo.

ord e in  
→ r - p - s - m?  
• d - te - u - r.  
e - h - b - d - r - r - l - o - u.

lf:

c - o - r - r - r - h,  
- n - l - h - u.

uf lo.

u - r - y - o - l.

4:

→  $\sim b, e, 1, 9, 10, 12!$

e für 2 2 2 2 2

•  $2e, 10, 12!$

12 2 2 2 2 2,

2 2 2 2 2 2.

2 2 2 2 2 2,

→  $2 2 2 2 2 2$

•  $2 2 2 2 2 2$

2 2 2 2 2 2.

2 2 2 2 2 2

2 2 2 2 2 2!

2 2 2 2 2 2

→  $2 2 2 2 2 2!$

2 2 2 2 2 2,

2 2 2 2 2 2!

2 2 2 2 2 2,

2 2 2 2

2nd row, 0-1;  
→ 5th row, 1-2.

df. 60.

1st row, 0-1;  
2nd row, 1-2;  
3rd row, 2-3;  
4th row, 3-4;  
→ 5th row, 4-5!

6:

1st row, 0-1;  
2nd row, 1-2, 2-3;  
3rd row, 2-3, 3-4;  
4th row, 3-4, 4-5;  
5th row, 4-5, 5-6;  
6th row, 5-6, 6-7;  
7th row, 6-7, 7-8;  
8th row, 7-8, 8-9;  
9th row, 8-9, 9-10;

22226e2 26'-10 2h,  
^c-052~62h,  
-2 2b, 2b, c~  
-, 066, 2 2D, 2h.

2h 60:

- 2 2, 2 2 2 2  
~ 2 2 2 2  
e 2 2 2 2  
~ 2 2 2 2 2 2  
2 2 2, 2 2 2  
• 2 2 2 2 2 2  
2 2 2 2 2 2  
2 2 2 2 2 2  
- 2 2 2 2 2 2

6:

~ 2 2 2



26/10

e.b) 2m!

2 → 2. v. v.

1. f. v. g. i. n. d. i. n.

2. e. l. i. p. s. e. n.

o. p. u. s. e. n.

b. e. z. e. n. g. l. e.

- e. b. e. n. e.

s. u. n. g. e. l.

o. e. n. t.

o. p. o. s. t.

o. p. e. l. e. n.

o. e. l. i. e. n.

b. e. s. e. p. e. l. e. n.

2. b. i. - s. e. l. e. n.

- s. e. l. e. n. t. e.

D. e. l. e. n. t.

2. b. i. - s. e. l. e. n.

§' r z n v w o m.

Ц:

с о в и е, с и з н;

ш ж н м л п р;

д и б в г з;

ц ф х.

г в а н с о е б.

ж а к м с т в н,

г е л о с м с о н;

г в б д н, с о е б.

Ц:

и б; м о а и з ж

о з г б с в а р л,

- с и в а н е ж,

д м н р н з л;

$1\sqrt{2} \sim 2\sqrt{2}$ ,  
 $\sqrt{2} \text{ pen } \sim 2$ .

df. Co.

$2 \sim 2, 2, 1, 0, 1, 2,$   
 $0 \sim 1, 2, 1, 0;$   
 $1 \sim 0 \text{ eff } 2,$   
 $0 \sim 0 \text{ no } L \text{ or } U.$   
 $0 \sim 2 \text{ no } L \text{ or } U$   
 $- \sim 2 - 2^m, 1^2 \text{ or } 1;$   
 $0 \sim 0, 0 \sim 1, 0 \sim 0,$   
 $0 \sim 0 \text{ or } 2^m$   
 $0 \sim 0 \text{ or } 2^m \text{ for } n,$   
 $2 \sim 2 \text{ or } 1, 2?$   
 $1 \sim 1 - 0 \sim 2 \text{ or } 2,$   
 $0 \sim 1, 1 \sim 2 \text{ or } 2.$   
 $0 \sim 0! \text{ or } 0 \sim 0 \sim 0,$   
 $- 2 \sim 2, 1 \sim 2!$

10-0: ~ m, j, p, t,  
• 0 ~ n, r, s, m, z e  
S r o o r b p r o o z p t,  
- r o o p d z r h c e.

4:

obv re n?

alg lo.

r m n l.

co: el ~ w t?

co: ob el ~ m b,

]-, h o r p?

o g e<sup>2</sup> r n d n c d!

co- g d e f s j q k n?

e t, co g d n,

e t g ~ u d / o n.

r 2, ~ s<sup>2</sup> n!

4:

v p / r r, r / o z.

df lo.

~ r n e d r,

~ e l / g b r.

r, r v e ~ - v i;

r o r o v r b f.

~ r e l ) r

~ s o - r r c f!

~ l d ~ h y d h f i;

~ r o r d p / z m l w!

4 r.

2/3 Lo: (2/3 r r r r)

11 - null - 0/1,

0 2/3 r r r r r,

0 - 2/3 r r - r r r r

0/3 2/3 r r r r r,

- 0, 0/3 r r r r r

r r r r r r r r r r,

1/3 r r r r r r r,

- 0 1/3 r r

1/3 r r r r r.

~ 1/3, r r r r r,

r r r r r r r,

0 1/3 r r r r r r r,

- 0 1/3 r r

0 1/3 - r r r r r r r r r r;

1/3 r r r r r r r r r,

- 1/3 1/3 r r r r r r r r r,

1/3 r r r r r r!



2 m c o b e r o m m.

2 f l o.

e s t r u n d e n d.

g e r:

2 l l o, 2 j e l:

2 r u n, 2 e n

- v r o s f e n.

i n d f e r v

2 o l h e, 2 u l

- 2 o s t, 5 l e n n;

2 v 2 u, 2 i - e n n.

2 f l o.

e n d t r u n d e n

- 2 l - 2 e - 2 u l

1/2 r u n d e n



duwend- ) 2 f.  
— 4 7 2 10 6  
2 10 2 2 f.

zer:

~ N 20 - 1 2 10 2 2;  
2 10 2 2, 0 1 2 2 2?

2 f. 10.

2 10 2 2, 0 1 2 2;  
2 10 2 2 2 2 2?

zer:

1 0 2 2 2 2 2;  
- 2 10 2, 0 1 2 2  
- 2 2 2; 10;  
1 0 2 2 - 1 2 2.

df lo:

er<sup>e</sup> r s' h p;  
d r b r s' h p o.

zu:

r v a r o - s;  
d l s v m  
~ w l s - f m  
~ z n o u l u m.

df lo:

h f , b n - z s m;  
d r e s t s' h p o.  
z l l e o r s' h  
f z m m.  
er' r b s' c b',  
z f s' g l e - p p',  
e - w l m - h

22/2, p. 10, 11,  
-100, 100-10,  
100-2-2.

en 100 100 100,  
e, 100 100 100  
100, 100-100,  
100 100 100.

100 100 100  
100 100 100,  
100 100 100,  
100 100 100,  
100 100 100.

100 100 100  
-100 100 100:  
100 100 100,  
-100 100 100;  
-100 100 100,

e d - h c a s u r .  
e l o , g e n t ,  
z u n a t .  
a - c o s t o m m - d f u ,  
d l ~ z b z o j l u ,  
e d , i l z o x e ,  
l , e ! - e z b v e .  
d o n n i , z u ,  
g u m b - c o / a .

g e :

~ s t u r y g e .

d f l o :

e t d o j o r e ,  
c r a n e o r e g n  
- p r o b o .

gen:

$v' \int \dots - e_1$

$\sigma \tau, v \sim \dots$

alg. lo.

$D_1 \sim \dots$

$v' \int \dots$

$e_1, e_1 \dots$

$\dots$

$\dots$

$\dots$

$\dots$

$\dots$

$\dots$

$\dots$

$\dots$

$\dots$

$\dots$

e. 1st, 2nd, 3rd of 4;  
2nd of 4th, 5th, 6th,  
7th, 8th, 9th!

je:

e. 1st, 2nd, 3rd, 4th;  
1st, 2nd, 3rd, 4th;  
e. 1st, 2nd, 3rd, 4th, 5th,  
6th, 7th, 8th, 9th.

df. 1st.

e. 1st - last!

je:

1st, 2nd, 3rd, 4th, 5th.

df. 1st.

1st - 5th, 6th, 7th,

1.  $\infty, \infty - 2 \approx \infty$ .

-  $\infty) \rho' - \infty$

$\infty - \infty \approx \infty$ ;

$\infty \rho \in \rho \rho) \rho \rho$ ;

-  $\infty \rho \in \rho \rho$ .

$\infty \rho \in \rho \rho$ ;

$\infty \rho \in \rho \rho$ ;

$\infty \rho \in \rho \rho$ ;

$\infty \rho \in \rho \rho$ .

2.

$\infty \rho \in \rho \rho$ .

-  $\infty \rho \in \rho \rho$ !

$\infty \rho \in \rho \rho$ .

3.

$\infty \rho \in \rho \rho$ .

$\infty \rho \in \rho \rho$ ,

- i-g, ~lg a/r e,  
 - d-r f u h o d l,  
 - f-g b n j h e.  
 a b b o r, c r ~ z d,  
 - s o r b e t z d.  
 r z p m z d j ~ c t!  
 e n r r, b e t  
 j r o p d ~

g r:

d ~ d r o u r e t o.

u f l o:

g z! ~ r o r n) / g r d e n  
 e n r c d l e n,  
 e s f d ~ c d / d e f) ~  
 z c t b) h e f ~,  
 z c t ~ o p u ~,



$\sim c \sqrt{b} \ln w$   
 $\int \sim c \sqrt{b} \sim \ln w$

20:

$\int, \int \int \int \int \int \int \int \int \int \int$

$\sim \int \int \int \int \int \int \int \int \int \int$

$\sim \int \int \int \int \int \int \int \int \int \int$

$\int \int \int \int \int \int \int \int \int \int$

$\int \int \int \int \int \int \int \int \int \int$

$\int \int \int \int \int \int \int \int \int \int$

$\int \int \int \int \int \int \int \int \int \int$

$\int \int \int \int \int \int \int \int \int \int$

21: (1)

$\int \int \int \int \int \int \int \int \int \int$

$\int \int \int \int \int \int \int \int \int \int$

(2)

$\int \int \int \int \int \int \int \int \int \int$



e - v r d f r d t g t ;  
j - v i d r e n d e n b u d e ,  
v i - e i f t h e f t ,  
g r e b e n c . j o n ,  
- b o b , r l r p z u w ,  
c r i z e r d t l ,  
j o z , o l b p p t o .

g r :

e s t g u o d r u o t e , c - a .

u f l o :

b , l u l e i e u s ,  
- h o r o z e n u

g r :

1 z r s j , v t o o ~ h  
o l l , s c ~ n o y u ,

$$\int_{\mathbb{R}^n} \cos \theta \sim h_j 2 \pi^2$$

df lo.

$$\cos \theta, \theta \in \mathbb{R}^n.$$

gen:

$$1 \sim \rho \in \mathbb{R}^n,$$

$$2 \sim \int \rho \sim \rho \sim \rho,$$

$$2 \sim \int \rho \sim \rho \sim \rho!$$

df lo.

$$\delta \subset \mathbb{R}^n.$$

$$\int \rho \sim \rho.$$

gen: (b)

$$\rho \sim \rho \sim \rho, \text{ and } \rho \sim \rho.$$

$$\rho \sim \rho \sim \rho \sim \rho.$$

uf. lo.

↳  $\rightarrow$   $\beta$  -  $\rightarrow$   $\alpha$ ,  $\beta$ ,  
 $\alpha$   $\rightarrow$   $\beta$   $\rightarrow$   $\alpha$ !

uf. 15.

uf.

$\alpha$   $\rightarrow$   $\beta$ !

uf. lo.

$\alpha$  -  $\beta$ .  
 $\alpha$   $\rightarrow$   $\beta$ ,  $\alpha$ ,  $\beta$ .  
 $\alpha$   $\rightarrow$   $\beta$ ,  $\alpha$ ,  $\beta$ .  
 $\alpha$   $\rightarrow$   $\beta$ !

uf.

$\alpha$   $\rightarrow$   $\beta$ .  
 $\alpha$ ,  $\beta$ .

1.  $v \sim d/m;$   
1.  $b \sim p, d/jm;$   
1.  $b \sim p - m;$   
1.  $g \sim m.$

*df*  $h_0:$

1.  $m \sim e' \sim m;$   
1.  $e \sim b, m \sim e, j/m.$

*g:*

1.  $m \sim e^2 \sim 2?$   
1.  $e \sim b, m \sim m?$

*df*  $h_0:$

1.  $v \sim w_e,$   
1.  $o \sim p, d/m.$   
1.  $e \sim b \sim q \sim m/j$   
1.  $v \sim z \sim e.$



# AUERBACHS KELLER IN LEIPZIG

*Handwritten signature*

*lg:*

- *Handwritten scribble*
- *Handwritten scribble*
- *Handwritten scribble*
- *Handwritten scribble*

*ben:*

- *Handwritten scribble*
- *Handwritten scribble*

*lg: (Handwritten scribble)*

*Handwritten scribble*



ben:

elz!

ly:

h — / h, w, o!

o:

h 20, 1) y!

2 h 46 v, o! - j!

s! 2 u! 2!

res:

o v, 1 v u!

h u! m f v, u.

o:

o f u E j!

h u h h o h o j!

lg:

— 2022, 2023, 2024!

1. 2022!

lg:

1. 2022!

lg:

1. 2022!

2.

1. 2022!

1. 2022!

lg:

1. 2022!

1. 2022!

1. 2022!

1. 2022!

e, / no - a n g v.  
d r o d s ~ w o l l e n;  
r ~ ~ A b s e n.  
r d, d - e s t  
~ g r u t, ~ w s t.

by: (6/5)

g r o s, b ~ M e;  
w v ~ d h p r o p e.

6.

2 d h ~ b o !, - e s t 2 m!

by:

2 d h b o - n o ! e s t v / a n!

6.

2 d s ! 2 g e n d l.

2 d s ! \ d d l.

2/! 2 2 2 2.

6:

4, 6, 6 - - - 2 - 2 6!

1 - 2 2 2 2.

6 2 2 2 2, 2 2 2 - 2.

2 2 - - - 2 2 2!

2 2 2 2 2 2 2 2;

2 2 2, 2, 2 2 2 2,

2 2 2 2 2 2 2 2!

2 2 2 2 2 2 - 2

2, 2 2 2.

1 - 2 2 2 2,

2 2, 2 2 2

6: (2 ~ 2 2 2)

2 2! 2 2! 2 2 2!

2 2, 2, 2 2 2



ben:

6 6 2, 6 6 2,

- 6 6 2,

6 6 2, 6 6 2,

- 6 6 2,

6 6 2, 6 6 2,

6 6 2, 6 6 2,

6 6 2, 6 6 2.

2:

6 6 2, 6 6 2.

ben:

6 6 2, 6 6 2,

- 6 6 2,

6 6 2, 6 6 2,

- 6 6 2,

6 6 2, 6 6 2.

2. b e l l e r f e l l e n ,

o r b e r r e n .

2. o :

o r b e r r e n .

o :

a) , G u n g l e !

- v - R e n d ,

~ w e r d l i f e !

l e n :

b f c o r e r e l d ?

l e n :

\ z u l l e n e n G e !

e p r e r r e - v e ;

\ o r i e n t e n t

o n y n m n b l

l f - d f l o k h s

l f l o:

1 2 0 p n e n o n

2 f p o f l o n,

o e y b, a l j n b.

2 L n x t e n n b.

2 c o d f - f u n

e t e n ) n n p n y,

a l n p i i z y.

c o l x n l o n n,

- n i d - c l e n t,

2 b n d - p o n t.

b e n:

1 n n n s i v o,



$2 \text{ or } \sim \text{M} \text{ can } \text{C} \text{ o};$   
 $6^2 / \text{fe } \text{x}.$

by:

$\text{w} \text{ o}, \text{y} \text{ o} \text{ s} \text{ l} \text{ i} \text{ z} \text{ e} \text{ s} \text{ p} \text{ r} \text{ i} \text{ v} \text{ e}!$   
 $\text{i} \text{ n} \text{ n} \text{ C} \text{ o}, \text{-v} \text{ e} \text{ l} \text{ o} \text{ z}.$

6:

$\text{l} \text{ c} \text{ o} \text{ b} \text{ e} \text{ y}, \text{ h} \text{ e} \text{ r} \text{ z}?$

by:

$\text{o} \text{ v} \text{ e} \text{ r} \text{ w} \text{ i} \text{ l} \text{ l} \text{ r} \text{ e} \text{ n} \text{ z} \text{ o}$   
 $\text{p} \text{ r} \text{ i} \text{ v} \text{ e} \text{ s} \text{ t} \text{ e} \text{ y},$   
 $\text{~} \text{u} \text{ n} \text{ d} \text{ e} \text{ r} \text{ s}, \text{ o} \text{ v} \text{ e} \text{ r} \text{ s}.$   
 $\text{b} \text{ z} \text{ r} \text{ v} \text{ o} \text{ r} \text{ h} \text{ e} \text{ r} \text{ z},$   
 $\text{b} \text{ o} \text{ z} \text{ f} \text{ e} \text{ l} \text{ l} \text{ e} \text{ r} \text{ o}.$

ben:

wilfen<sup>20</sup> p<sub>0,1</sub> ca!

ben:

L.

ly:

re B<sub>1</sub> je b!

ulj lo: (j lb)

~ L. ge/e L. oder ~,

- c. b. u. r. n. r.

ly:

e s/p<sub>0,1</sub> r. n. n!

o:

L. en j n b.



Sonstige, S/son,  
S/so, S/ten ghr.  
~ d) nly.

res.: (✓)

es) es! ~ gd!

u:

~ elu AL!

lj:

~ elu ~, ~ nly!

ulj lo:

$c_1/N, 2\sqrt{r}$

$\mu$  ghr 2<sub>0</sub> om?

$\rho, \rho_0$  h. x

Sx c<sub>1</sub> E ~!

lg:

$\rightarrow \text{cm} \sim \text{H}_2\text{O}?$

df lo:

$\rightarrow \text{m}, \text{W}, \text{p}, \text{m}, \text{f}, \text{Z}.$

res:

$\text{W}, \text{J} \sim \text{H}!$

df lo:

$\text{c}, \text{W}, \text{m}.$

h:

$\rightarrow \text{D} \sim \text{m}, \text{p}!$

df lo:

$\text{r}, \text{m}, \text{p}, \text{p}, \text{p},$

$^2 \text{z}, \text{m}, \text{c}, \text{c}, \text{p}.$

o.

- a ~ b ~ c,

\ 1 ~ 2 ~ 3 ~

ly:

2 ~ 1! ~ b! ~ c! ~ e! ~ f! ~

~ b! ~ v ~ d! ~ v.

df. lo. (o.)

- a ~ b ~ c

\ 1 ~ 2 ~ 3,

~ d! ~ e! ~ f!

o o o m o o:

e! ~ o! ~ z!

\ z! ~ v! ~

e! ~ v! ~ z! ~

- v! ~ z! ~



sch-nd,  
-a-ll' b/mn,  
-a-b' l.  
r-mn-yu  
d'z', c-r'pl.

2<sub>o</sub>: (d'ye)  
r-mn-yu  
d'z', c-r'pl.

4<sub>j</sub>:  
k!k!eaz!

6<sub>i</sub>:  
-°-ter l's m'!

6<sub>er</sub>:  
gd, l'm-W'ol!



res:

-a, b, c! -a'c!

df lo:

1 hr m ~ 20, 1 b 2/1 m,  
c ~ c ~ b 10 cm.

6:

r r e / e r m!

df lo:

1 b k ~ ; d y g r i ;  
o d r r , q c r b  
e r i r m c o j b .

6:

→ m 2! , 2 6 5 v p .

lg:

$g \sim \nu_0 \nu_0 - \nu_1 \nu_1$

$\rightarrow \nu_1 \nu_2 \nu_3 \nu_4$

$\nu_0 \nu_1 \nu_2 \nu_3$

$\nu_1 \nu_2 \nu_3 \nu_4$

res: (0)

$\nu^2 \nu_0 \nu_1 \nu_2$

alg. lo:

$g \sim \nu_1 \nu_2$

ben:

$\nu_0 \nu_1 \nu_2 \nu_3$

$\nu_1 \nu_2 \nu_3 \nu_4$

res:

$\nu_0 \nu_1 \nu_2 \nu_3 \nu_4$

df. lo. ( $\mathbb{R}^d \sim \text{lin. } \mathbb{R}^d$ )  
 $\sim \text{ot, co-ot, } \mathbb{R}^d \mathbb{R}^d$ ?

lg:

$\sigma \mathbb{R}^d \mathbb{R}^d \mathbb{R}^d \mathbb{R}^d$ ?

df. lo.

$\mathbb{R}^d - \mathbb{R}^d \mathbb{R}^d$ .

res.: ( $\mathbb{R}^d$ )

$\mathbb{R}^d \mathbb{R}^d \mathbb{R}^d \mathbb{R}^d$ .

lg:

$\mathbb{R}^d \mathbb{R}^d \mathbb{R}^d, \mathbb{R}^d \mathbb{R}^d \mathbb{R}^d$ .

$\mathbb{R}^d \mathbb{R}^d \mathbb{R}^d, \mathbb{R}^d \mathbb{R}^d$ .

df. lo. ( $\mathbb{R}^d \sim \mathbb{R}^d \mathbb{R}^d \mathbb{R}^d$ ,

$\sim \mathbb{R}^d \mathbb{R}^d \mathbb{R}^d$ )



~ R 8 u u ~ h p e,  
D r e h t. m.

u: (u) d f l o o r (g ~ s t)

120 p i, ~ z n' u i,

u v ~ 20 f R o!

d f l o. (u)

1° → 1 u r b o.

u r:

~ , z n, o v 10 p!

10 - ~ , 1 2 5 → j b.

d f l o.

1, 1, 2 2 e 2 o

~ ~ b f p!

p! → 2 20 p!

2 ch c n, em?

res:

2 ter!  $\rightarrow$  / r h.

Dr. Dept - y d?

df lo. (2 o<sup>per</sup> per)

h h' c y!

2 m' p u;

' c' o l', 2 y, u,

' 2 y u D r c D u.

~ h u r, u!

x ~ c e, u!

~ p, l h - p!

$\rightarrow$ : (206, 166) - Serient

2020-11)

$\rightarrow$  2020-11, 166!

2020-11:

$\rightarrow$  2020-11, 166!

6 km 1021.

$\rightarrow$ : (6 km)

1. 2020-11, 166!

2020-11, 166!

2020-11:

1. 2020-11, 166!

166:

1. 2020-11, 166!

df Co:

$x \rightarrow 1, 11, 111, \dots$

1) 2222222222

6: (1111111111, 1111111111)

2222222222, 2222222222

df Co: (1111111111)

1111111111

1111111111

1111111111

6:

1111111111, 1111111111

1111111111

6:

1111111111



res:

$1, 20 \sim 2y \text{ of } \omega^2$

6:

$co, x^2, -) f^2,$

$-x \sim 2 \text{ of } \omega^2$

df lo:

$f, \text{ of } \omega^2$

6:

log!

$g \sim 2 \text{ of } \omega^2$

ben:

$\omega^2, \text{ of } \omega^2$

res:  $(y \sim p l e^{-2} \eta,$

$- p l e_{2m})$

$1 h! \rightarrow h!$

$g b! \rightarrow m! \rightarrow h!$

$6 p, 10 - 12$  s d f l o a.

df lo:  $(2 n d^2 p e)$

$6 p e - c \sqrt$

$2 n d - \sqrt!$

$2 x - c \sqrt!$

$6 p y \sqrt - 2 n d n.$

res:

$c v ? c b o z \sim r c!$

lg:

$\ln n! \sim n \ln n$

h:

$-\ln n! \sim -n \ln n$

lcn:

$\ln n! \sim n \ln n$

$\ln n! \sim n \ln n$

$\ln n! \sim n \ln n$

$\ln n! \sim n \ln n$

df lo: (0 - n)

$N^c, \ln n! \sim n \ln n$

$-\ln n! \sim -n \ln n$

$\ln n! \sim n \ln n$

6.

com?

ren:

ol

ly:

creno?

ben: (j6)

-e 2 1 2 20!

ren:

-a ~ 2, 2 ~ 2 2!

20 ~ 2, 2 ~ 2!

ly:

~, ol 2 ~, co: 2!

lg:

$c \cdot n^2 c_1 n^p,$

$\log n / \log n!$

res:

$12 \sim 620 / n \sim m$

$5 \sim 60 \sim 2m$

$-12 \sim 60 \sim 2m$

$\int D^2 f \cos.$

$2! \cdot c \cdot c \sim 60?$

6:

$4n \sim 20, n \sim 5$

lg:

$v \sim 2, s \sim 1, c$

ben:

uoa-2~h?

ben:

~ov ~, ~° ~ca ~!

# HEXENKÜCHE

5 r v n x e g ~ 2 0 n o x<sup>2</sup>  
L x i z<sup>2</sup> e q i e l z i z z g t , j n  
J g h p t . - m y o f u<sup>2</sup>  
n o - z d n - o d , e , l s o .  
m a i ~ h u d e n y - c o d ) .  
c e - e r z z<sup>2</sup> o f h e n y p d .

U. d. f. l. o.

U:

v E p i e L ~ j u t o n !  
p h e y v , i p o  
z o r c f s o w ?  
u , v s r s c u  
- p l , o e r h  
c e b h v s u

ov, ce, 10° c b!  
j, 2 h, v gei  
v, n - v - e 2 b  
1, n e ~ u o e b e ?

uf lo:

2 l o, ~ f h e e n !  
p, m, n, ~ n 2;  
~ f 2 ~ h o,  
- ~ e n n.

6:

1 - 0.

uf lo:

2! ~ 2, → 2e  
- f - m / 2:  
v n p 2 ~ 2 o s e l,





6:

en e f e!

~ h / o h?

2/3 60:

e c ~ z u f h!

1 - 2 c. 60 b m h

1 n d - o f e,

f e - v<sup>2</sup> a n o.

~ g u z b i h r p l l,

1 f - v, h r s n l l.

- e o, c o y p d,

- 2 n c e n d h!

\ L b o f p l;

e \ L b o / v h.

1 n d e.

b, d ~ g r o p l l!

e, v n e! e \ n l l!

$\int \sim m:$

$-z, 1/2, 1/2?$

$\int \sim:$

$\int z_0,$

$o^2 z_0$

$\int \int z_0!$

$\int \sim \text{lo.}$

$o \sim \text{lo} \subset \int z_0!$

$\int \sim:$

$- \sim \text{ris, lncan.}$

$\int \sim \text{lo.} (\int \text{lo})$

$o \text{ lo} \subset \int \sim m?$



- 2 2 2 ✓,  
- 2 2 2 ✓!  
2 2 2 ✓,  
- 2 2 2 ✓,  
- 2 2 2 ✓.

2 2 2 ✓.

2 2 2 ✓,  
2 2 2 ✓!

2 2 2 ✓ - 2 2 2 ✓  
2.

2 2 2 ✓.

2 2 2 ✓,  
2 2 2 ✓ - 2 2 2 ✓  
- 2 2 2 ✓,  
2 2 2 ✓

сделай

• 2. 1000.

22/66,

- 222:

» 1000!«

2200,

2200!

22000!

6: 12,

- 22000.

22000.

60000!

22000: (22 - 22)

22000 - 22,

22000 - 22000.

22000 - 22000.

р р е е!

~ e / e ~ e,

- e / e ~ / e?

*red* р р е е: )<sup>2</sup> e ~ e (e)

- e / e?

*red* ~ e - e:

~ e / e!

~ e / e ~ e,

~ e / e ~ e!

*red* р р е е:

р р е е!

*red* ~ e:

~ e. e e,

- e e e e!

~ st ~ dfg boj of.

Q: (Ch 4/5 ~ rgrgrgr,  
) R ee r r r, ee) S R r r r r)

cos r: CD ~ r r r r

f r ) = r r r r r!

- r, r, r r ~ r r r r r,

- r r r r r!

D C r / s r r r r,

C r - C r, r r / r r,

r r b ~ r r r r r r!

e r r r r r r r!

r r r, e r r - r r!

r r r ~ r r r r r r

~ r r r r r r r r!

- r r r r r r r!



df lo:

$\sim m; c \sim 21) \delta \delta \delta n \delta t,$

- bare k d,

erro - coeff<sup>o</sup> a.

l r o p d r o t,

1 c o a - ~ p h e p p r,

- o d, a e n z o o z,

s L m o z r y b u!

l f o m l z ~ p d d f l o, ) i<sup>2</sup> o e w e

- i<sup>2</sup> a e p e, l l y p e.

x d, o ~ m p s<sup>2</sup> L,

~ p d z d, x, - l - 2, m.

1 m: (d b e a c o r w z e o p l z,

l m<sup>2</sup> d f l o - ~ i l b f)

1 - d - n,

220-264

1.  $\sim \sqrt{m}$

622  $\sqrt{2} \sim \sqrt{2} - \sqrt{2} \approx 0.707, 2 \sqrt{2} \approx 2.828$   
2.  $\sqrt{m}$

$\sim \sqrt{m}$

1.  $\sqrt{m} - \sqrt{m}$

2.  $\sqrt{m} - \sqrt{m}$

cf:  $(n \sim \sqrt{m})$

os  $\sqrt{m}, \sqrt{m}$

df:  $(s, m, e, r)$

$\sim \sqrt{m} \sim \sqrt{m} \sim \sqrt{m}$

1.  $\sqrt{m}$

-  $\sqrt{m}, \sqrt{m}$

-c- ) z',  
- z - fun!

U: (0 - u)

z u b v ~ / h u!  
d u r s t ~ p o!

U: lo. (z - u f u)

u, c d r o u u u,  
e, s p r C u h z.

'no, ch, ng, b, o, n, p, s, l, w, z, ph, - y, f  
- l, o, b, r, c, t, j, z, n, g, z, o, z, t, ., d, t, n, d, p  
, l, a, z, s, g, a, f, d, h, u.

, d, t, :

s! s! s! s!  
e d r! l l o j!

o/ ~ no, o/ l/!

Mo r!

lf - lf lo we.

co: ex?

ca ^ r?

co - / r ex?

ca p) ~?

l<sub>2</sub> l

no p!

o/ r<sup>2</sup> p l<sub>2</sub> ~ no - ff l<sub>2</sub> ~ D l<sub>2</sub>, lf lo

- ~ m, r con.

lf lo: (ch ~ ce, ~ i: ce 2/, r/ - l, r/ -

l z b)

y! y!



1. 2.:

— x, y ~ 26!

o, d ~ 60.

c<sup>2</sup>u ~ 4u u!

2. 3.:

l<sub>2</sub> ~ 4<sub>2</sub> — 4;

e<sub>2</sub> ~ 1 — c<sub>2</sub>;

e<sub>1</sub> / p<sub>2</sub> 2.

D<sub>1</sub> ~ 1, 1 — d<sub>1</sub>;

25 ~ 4) f<sub>1</sub>;

e ~ 4 h<sub>1</sub> ~ 2 / p<sub>1</sub>;

c<sub>2</sub> ~ 2, 2 — 2<sub>1</sub>?

— c<sub>1</sub> ~ 6, 1, 1 / 2<sub>1</sub>;

~<sup>5</sup> v ~ 2 p<sub>1</sub>;

e<sub>1</sub> ~ 1, 1, 1 ~ 2<sub>1</sub>;

o ~ 2 ~ 2 p<sub>1</sub> c<sub>1</sub>.

1. 2. (Lyc)

$\sigma - \gamma \epsilon \sim 1 \gamma$ ,

$\sigma_1 \sim L_m \sigma \epsilon \alpha!$

2. 3. 4.

$\sim m, c, u, v!$

1. 2. 3.

$\sigma_1^2 \sigma_2, \sigma_1 \mu^2$

2. 3. 4.

$\sigma_1 \sigma_2 \sigma_3 \sigma_4 \sigma_5$ ,

$\sigma_1 \sigma_2 \sigma_3^2 \sigma_4 \sigma_5$ ,

$\sim \sigma_1^2 \sigma_2 \sigma_3, \sigma_1 \sigma_2^2 \sigma_3$ .

$\sigma_1 \sigma_2 \sigma_3 \sigma_4 \sigma_5, \sigma_1 \sigma_2 \sigma_3$

$\sigma_1 \sigma_2 \sigma_3 \sigma_4 \sigma_5$ .

$\sigma_1 \sigma_2 \sigma_3 \sigma_4 \sigma_5$ ,

$\sigma_1 \sigma_2 \sigma_3 \sigma_4 \sigma_5$ !

$\sim \mathcal{L} \rightarrow \text{approx.}$

$\mathcal{L}: (\mathcal{L} \text{ p b})$

$2! 2! e \cdot 2 \sim \mathcal{L}!$

$\wedge^e \sim 22, \sigma \wedge \rightarrow \mu \mathcal{L}!$

$\mathcal{L} \text{ lo. } (\mathcal{L} \text{ b})$

$\sim \mathcal{L} \text{ e m c y!}$

$9: \mathcal{L}, \mathcal{L} \text{ p p i.}$

$\mathcal{L}:$

$\sim \mathcal{L}, \mathcal{L} \text{ c o r p l.}$

$\mathcal{L} \text{ lo.}$

$\sim 2_0 2_0 \int^2 \mathcal{L} \text{ d!}$

$\mathcal{L} 2_0 \rightarrow 2_0 \int \mathcal{L};$

$\mathcal{L} \text{ e t o r d.}$



121:

22m! 221 - 6p,

0-16 p m n p,

1, D/2 R v b g n l;

1-1 m ~ 22 m.

o.

20-92 p m h d

- n, d r c, l - g e m.

122 lo:

1-22 l o<sup>2</sup> - p 20;

122 R m e t e r d.

p e r n o, p e p t,

- x R - 10 u!

122, 20<sup>2</sup> p e r, p ~ n o - f e c e n d e 2 =

~; 2<sup>2</sup> l o, 20 ~ j n m, 1 n o j l e n, - d e

26. p l W b ~ 200, f e l, m p 2 ~ n o, 1 r

$\int \cos x - \ln 2 \cos x \cdot \cos x dx, \int \cos x dx$

$\int \cos x dx$

$\sim \cos x, \cos^2 x$

$e^{-x} \cos x, \int \cos x dx$

$\int \cos x dx$

$\int \cos x dx, \int \cos x dx$

$\int \cos x dx$

$\int \cos x dx \rightarrow \int \cos x dx$

$\int \cos x dx \rightarrow \int \cos x dx$

$\int \cos x dx \rightarrow \int \cos x dx$

$\int \cos x dx \rightarrow \int \cos x dx$

$\int \cos x dx, \int \cos x dx$

$\int \cos x dx, \int \cos x dx$

$\int \cos x dx$

o ~ v p,

- f o r,

- e v s,

- u e s.

u, h!

o b l - o o,

- d, s,

v o u - n,

- p u:

- n i e,

- p i n o.

e · e s = r e d!

U:

v o u t, i s t p e r.

v f l o:

e · i n t / s,

1 m - c, - n Nery 0;  
12 w f o l e n,  
a - n - i n e f)  
w d s p w b l o r o l e n.  
2 b o i n d i t - n s.  
- a i n d j e n f,  
p e - e, - e - e  
N g r o j d.  
- g f - d u g f d;  
a - ) 2 ~ n n d o?  
f u n d ' w g, c. - c f 2 d,  
- v ) a d i c o e n o.

12. (WP)

122 n d

\ o f,

\ n p d e n n!

- a l e n t,

2'6 ppd,

\ 26 → om.

6:

cod 6 Jlf ~?

- 'v v' - n l p d.

pend, 12 ~ up 2

52e/60 ~ n p d.

df lo.

m, m, - the 62!

x e h x, - b

1, 2, 3 ~ v e 2;

e v l e' o h / z e:

i ~ u s h e n,

\ u h u z p.



122:

$x \sim \text{B}(\alpha, \beta)$   
 $- \alpha + \beta \text{ const.}$

123: (1/6)

$\sim \text{ge} - \text{od} \text{bn}$ ;  
 $\text{er} \text{b} \sim \text{kor} \text{bn}$ ;  
 $\text{er}, \text{bn} = - \text{bn}$ .  
 $\sim \text{bn} \sim \text{bn}$   
 $- \text{ge} \text{er} \text{bn}$   
 $\text{er} \text{bn} - 2 - \text{er}$ .

124:

$\text{er} \text{bn} \sim \text{bn}$ !  
 $\text{er} \text{bn} \text{bn}$ !

125: 126:

$\sim \text{bn} \text{bn}$ !

~le ~l ~e ~i.

o.

e b, r r h r u,

le z z r c u.





schon, auch,  
in der Welt!  
oben, unten,  
oben, unten;  
oben, unten,  
einigen!

elfte Seite.

6:

2, 4, 6, 8, 10!

elfte Seite.

2, 4?

6:

6, 12, 18.

df. 6:

entw. in SM,   
 \text{Dobner}   
 \text{Vollst.},   
 \text{in 2. Teil},   
 \text{entw. in 2. Teil},   
 \text{in 2. Teil}!

6:

in 2. Teil.

df. 6:

in 2. Teil,   
 \text{in 2. Teil},   
 -entw. in 2. Teil,   
 -entw. in 2. Teil,   
 \text{in 2. Teil}.

4:

2222222222  
0.2222222222  
-0.2222222222  
c/e22222222  
2222222222  
-2222222222

2222222222

2222222222  
2222222222  
2222222222

4:

2222222222  
2222222222  
-2222222222

alg. lo.

$\Gamma \mathbb{N} \times \mathbb{N} \sim \mathbb{N}^2$ ;

$\partial \mathbb{N} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{C} \times \mathbb{N} \sim \mathbb{N} \times \mathbb{N}$ ;

$\mathbb{R} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{Q} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{Z} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{C} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{R} \times \mathbb{N} \sim \mathbb{N}$ .

4:

$\mathbb{C} \times \mathbb{N} \sim \mathbb{N}$ .

alg. lo.

$\mathbb{N} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{R} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{C} \times \mathbb{N} \sim \mathbb{N}$ ;

$\mathbb{Z} \times \mathbb{N} \sim \mathbb{N}$ ;

120 5/b/bu.

6:

gl v ko S r off!

b v ~ m ~ 2 G!

gl v ~ 200 S m 4,

~ f p e r ~ 10!

df lo:

el r o, e r ~ C

- l e n - o d o'

~ r ~ n ~ w ~ u ~;

- 1 2 2 2 2 1 p u l u:

6:

- ° b o 2' 2' b 2 2'

2/3 lo:

~!

6' ✓ ~ 1000.

2<sup>00</sup> ✓ ~ 1000

~ 2000 ~ 1000

2000 ~ 1000

6:

~ 12!

2/3 lo:

- 2/3.

6:

~ 1000 ~ 1000

1.

2/3 lo.

2/3 June 1861

1000

- 1000

1000

1.



# ABEND

~ ~ ~ ~ ~

was: (Nyl the - see)

12202021 → 0,

ca 27' 20'!

\ 0 p 0 k u o

- i e l e r 2 i

e r t 1 R n i g u o m

\ c D o d l - m p o :

1.

df lo. l.

df lo.

2, 2, 2, 2!

Ц: (2D ~ m g y z u)  
1. u d, o p. ~!

Ц: lo. (2 p v c)  
1. k o r e h 2 / \_ ~  
1.

Ц: (v o g y c)  
~ ~ ~, o e y z,  
` 4 9 2 ~ ~ ~!  
~ ~ ~ 2 y, 4 o s d,  
1 4 5 4 ~ ~ ~ g l e d!  
o m i ~ ~ ~ g,  
` ~ ~ ~, ~ ~ ~!  
2 9 ~ ~ ~ d b!  
2 9 ~ ~ ~ d o!  
~ ~ ~ ~ ~ ~ ~ ~ ~ ~  
~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Ue-zyr hurep!  
o l, D! ~ r l h  
g- g l r e n r e p n!  
I z, e u l ~ z i n r b  
u l h x, z e n r e n,  
z o n l r, e r e p b.  
i b, r h, e r z b  
v b - r e z r l o o n,  
v m d n k b  
~ r l s ~ r l d m l v z b,  
u ~ e j e r l o r o n.  
r, r x! ~ r n s!  
i x r p d ~ r n s.  
- r!  
v z l ~ u r s.  
c o l b d l ~ e r b!  
x r l, e f e r o n  
u, x v e r b, l h l u

~  $\mu$  in  $\alpha$  e!  
x n e n e! z c n n  
~  $\mu$  b o y b!,  
- x z z' n c n  
x n t' j e z n e!

- e! c o z p z b?  
o n b, v p n!  
c o - e x? c o' e z y o z?  
n o m b! n m p / n.

v n v x ~  $\mu$  e l?  
v e n o, - k e j p o,  
- b v z n o h p o!  
z r ~ p' s t e r e n o!

-  $\mu$  b ~ n e z,  
o s b e l e n b o!

2020, Dd - m!  
1, 2, 3, 4, 5, 6.

df. Co. (m)

df. 106 - m.

6:

1, 1, 1, m - m!

df. Co.

x - m - m - m,

100 - m - m.

df. x - m - m,

1, 2, 3, 4, 5, 6;

1, 4, 5, 6, 7, 8,

2 - m - m.

df. m - m, - m - m.





~ 2 2' 2 2.

- 2 2' 2 2,

\ 2 2' 2 2,

1 2 2' 2 2,

— 2 2' 2 2.

- 2 2' 2 2,

2 2' 2 2,

2 2' 2 2,

~ 2 2' 2 2.

\ 2 2' 2 2,

1 2 2' 2,

2 2' 2 2,

2 2' 2 2.





erw - 20<sup>th</sup> Ave  
1er C, 10 - 5!  
co. el 21 R 20! 20,  
— co 12 n / p 2!  
~ 2! 2<sup>2</sup> / ed  
n 2 6 l un n.  
o v, n p 2  
an, n / p n!  
o G) or 5 - n ~ p.  
c, n r c n!  
n o 2 2 n p n.  
co 2 2 2 2, h o 4?  
e c. 20 2 - 2,  
n n o 2 2 2 2;  
n n 2 2 2 2 n.  
D r e w,  
n r e w  
D e o. D r e w!



# SPAZIERGANG

U<sub>2</sub> für 5-100.  
1 Rdf. lo.

Udf. lo.

U<sub>2</sub> für 5-100!  
1 Rdf. lo. U<sub>2</sub> für 5-100!  
1 Rdf. lo. U<sub>2</sub> für 5-100!

U<sub>2</sub>:

U<sub>2</sub> für 5-100!  
U<sub>2</sub> für 5-100!  
U<sub>2</sub> für 5-100!

Udf. lo.

U<sub>2</sub> für 5-100!  
U<sub>2</sub> für 5-100!  
U<sub>2</sub> für 5-100!

4:

2) or co R n l g u i  
P r e s o ~ o e j u i !

2) f lo:

e u t ~ ; ~ z , l W h y g l ,

~ o ~ e l z o p l l !

i n n d e o r j z u

z l b i r z u ~ j z u

i b z u ~ l u p ,

z l l r r p u

- l o r t e r z u ~

r e o r z o . e l h i ;

- ~ z e r g l , b r u ,

e a l b o n a .

» n r e « , l o , » j l o z y

l b l , o , j l s e l y .

— o \ z u z o c z u ,



$\sim \text{Le}^{-\text{nd}} \text{r} - \text{D}$ .

alg. lo.

$\text{P} \text{el} \sim \text{gr}, \text{r}! - \text{r}$ ;

$\text{sc} \text{r} \text{u} \text{b} \text{h} \text{r}$ ;

$\text{ent} / \text{ent} - / \text{r}$ ;

$\text{so} \text{b} \sim \text{r} \text{u} \text{b} \text{e} \text{r} \text{c}$ ;

$\text{P} \text{m} \text{e} \text{r} \text{d} \text{e} \text{r} \text{m}$

$- \text{b} \text{a} \text{r} \text{o} \text{t} \text{y} \text{e} \text{s}$ .

U:

$- \text{W} \text{h} \text{i}$

alg. lo.

$\text{d} \text{r} \text{u} \text{p}$ ;

$\text{co} \text{c} \text{e} \text{r}, \text{co} \text{b} - \text{J} \text{o}$ ;

$\text{ent} \text{r} \text{o} \text{p} \text{f} \text{e} \text{n} - \text{N}$ ;

$\text{J} \text{u} \text{r} \text{u} \text{r} \text{u} \text{r} \text{u} \text{r} \text{u} \text{r} \text{u} \text{r}$ .

Ц:

о. По м 40 е.

г. 12 ~ ~ ~ 10!

а. 10 - 15.

Ц. 10:

- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10!

Ц:

- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,

а. 10 ~ ~ ~ 10!

- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,

- 1 ~ ~ ~ 10!

Ц. 10:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Ц. 1.



2/3 lo:

— ~  $\mathcal{N} \sim \mathcal{M}$

$\mathcal{N} \sim \mathcal{M} \sim \mathcal{P}$

$\mathcal{N} \sim \mathcal{M} \sim \mathcal{P}$

1.

# DER NACHBARIN HAUS

was: (e)

21 y 20 22 23 24

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

21 22 23 24 25 26 27 28 29 30

31 32 33 34 35 36 37 38 39 40

41 42 43 44 45 46 47 48 49 50

51 52

53 54 55 56 57 58 59 60

61 62 63 64 65 66 67 68 69 70

want and.

was:

by was!

WIP:

h.h, co<sup>202</sup>?

WIP:

bb ~ v, m r!  
e b c, — ~ r b E  
z z f, l m f,  
- b m y - v,  
c ✓ h, o e l a.

WIP:

e r o b / ~ m o n;  
✓ e r / ✓ l h.

WIP:

D o s b — ! D z s b — !

wp: (y65)

— g 2002 rrrr!

wp:

er 2, e, /s' 20

2i n 2 2 2 0.

wp:

rrg — 1/ v 2x,

— n ~ 2 2 2 2 i

gg — gch n<sup>2</sup> p 20 — x,

1 2 i l e i

— er 2 ~ 20, 2 ~ 20,

c 20 — D — D ~ 20 2 0.

~ n h 2, 1 l e 20 ~ i

1 2 0 c 1, 2 2 1 2 0.

WWS:

and →, can not be  
- 1/2 shown!

- 1/2.

WWS:

Dr! ver 200!

WWS: (e 200)

- in her 200!

elf lo 1/5.

elf lo:

v - l, k 2/10,

200 ~ k y 2/10.

k 1/10 - 200/10.

—  $\int$  D'wz gō h!

wp:

$\int$  v; co; 'x / on?

df lo: ( $\int$  /  $\int$ )

$\int$  m b ff, v · e p; i;

b) e m ~ m b).

$\int$  i l, i, p m,

— Dm Em.

wp: (D)

em, v; , r · o z' d!

'x d l ~ L. d.

wp:

$\int$  v ~ v o h o b;

Dz! 'x · n / y:



www:

D! x b, y d!

df lo:

— 2 √, Lr d!

www:

1 r r r n' r,

8 r b j l e m.

df lo:

L e r e, e r o l e 2.

wp:

y / v o r o z o!

df lo:

√ H<sub>2</sub> C e<sub>4</sub> m



U2M10

~ ^ c y f z

f d n z u.

wp:

o r o d i ~ p j b m i

df lo:

h, - u, 20 - z:

o b d h l r e s e l w o o m!

r s h z z q u.

wp:

col / ~ z p r ? ~ p e r

co te x c n d a - g r h e o o e p l,

f y e n n a e l,

- h z u l, h u l!

df lo:

200, - 40 2y. e;

~ 100 2000 / yd.

D. u 20 lo;

h, - 1000 p 20 u.

wmt:

D. e, 2y - p 20?

p, 1 - 1000 20 u.

df lo:

1000, 20 20 y/h:

1000 - 1000 20.

wmt:

D. e, 2y 20 u.

ulj lo:

9/ ~ 2, ~ 2.

9: ~ 2 6 2 0 2,

— ~ 2 0 2 2 / 2.

wnt:

e · 0 2 0 / ~ 0.

ulj lo:

0 — e !! — 2 ) 0.

wnt:

9 / v 0!

ulj lo:

1 9 0 ~ 0 9 0 0,

— 0 0 0 0 0 0,

0 2 0 0 0 0; — 0 0 0 0 0

- be, e, c u 2 s p r.  
»o«, l, »ro, v s k e o 20,  
— u p u, u c — j o!  
D, i, v i g u p  
u b v — 2 p u!»

wp: (c c)

\ u u! 1 2 p u m.

uf lo:

»—, c o 2 1! b c u j e o 1.«

wp:

e d \! c o! n v e o h o j m!

uf lo:

\ k f p o 2 f p u,

c 1 — 2 d ~ m u.

»1« $\rho$ , »1/2« $\rho$   
1/2 $\rho$ , -e $\rho$  1/2 $\rho$ ,  
-1/2 $\rho$  e $\rho$ ,  
-1/2 $\rho$  e $\rho$  1/2 $\rho$ .

202:

1, -e $\rho$ , -e $\rho$  1/2 $\rho$ ,  
1/2 $\rho$  e $\rho$  1/2 $\rho$ .

203:

1/2, 1/2 $\rho$  e $\rho$ .  
1/2 $\rho$ : »1/2« $\rho$  e $\rho$  1/2 $\rho$ ,  
e $\rho$  1/2 $\rho$  e $\rho$  1/2 $\rho$ ,  
1/2 $\rho$  e $\rho$  1/2 $\rho$ ,  
e $\rho$  1/2 $\rho$  e $\rho$  1/2 $\rho$ ,  
e $\rho$  1/2 $\rho$  e $\rho$  1/2 $\rho$ .  
e $\rho$  1/2 $\rho$  e $\rho$  1/2 $\rho$ ,  
-1/2 $\rho$  e $\rho$  1/2 $\rho$ .



uf lo:

to: d. ~ n.

~ n ~ n ~ n

~ n ~ n ~ n

~ n ~ n ~ n

wp:

Dr: o d ~ n

be, l. ~ n ~ n

- n ~ n ~ n

- n ~ n ~ n

- he ~ n ~ he

- e ~ n ~ n

uf lo:

~ n ~ n ~ n ~ n

c. ~ n ~ n

~ n ~ n ~ n

$\gamma \sim \gamma, \gamma^2 \sim \gamma$   
 $\partial \gamma \sim \gamma \sim \gamma!$

WR:

$\gamma \sim \gamma^2 \sim \gamma \gamma!$

df Co. (l)

$\sim \gamma, \gamma \sim \gamma!$

$\gamma \sim \gamma \sim \gamma!$

$\gamma \sim \gamma$

$\gamma \sim \gamma \sim \gamma!$

WR:

$\gamma \sim \gamma \sim \gamma!$

df Co. (l)

$\gamma \sim \gamma \sim \gamma!$

$\gamma$



AC, rL!

WML:

AC!

WPD:

— d v d p c!

1 v m ~ f w 2,

c, o - a w p p w - m.

1 v s t' e y l e p o,

v l, ~ d l p c l u h o.

df lo.

h, n b, p f u f w v e

r e n c a, c w v e;

2 d n ~ l u p o,

~ - , s ~ ~ l u f u.

1 l u ~ o.

WD:

— 4 e h!

df lo:

— x, Lg: Des?

~ the m! f p b,

h. e. 2 b. c b.

WD:

to 2 m p a.

df lo:

~ m m m' m.

WD:

e 2<sup>m</sup> 2 2 2 2 2

— r' 2 2 2 2 2 2.

# STRASSE

cf. dfg. lo.

cf:

$\sigma \beta^2 \rightarrow \text{len}^2 \rightarrow \text{len}^2$

dfg. lo.

$\sigma \text{len}^2 \rightarrow \text{len}^2 \rightarrow \text{len}^2$

$\sigma \text{len}^2 \rightarrow \text{len}^2 \rightarrow \text{len}^2$

$\sigma \text{len}^2 \rightarrow \text{len}^2 \rightarrow \text{len}^2$

$\sigma \text{len}^2 \rightarrow \text{len}^2 \rightarrow \text{len}^2$

$\sigma \text{len}^2 \rightarrow \text{len}^2 \rightarrow \text{len}^2$

cf:

—  $\sigma!$

ulj lo:

o' n co s u w.

lf:

~ ord. c o h w.

ulj lo:

r n ~ v f w o r;

e n o n n e p r t z h

z c e s s ~ z m f z ~

lf:

o n p ! r c h i , v o r h v o !

ulj lo:

o p h b p h o ! e r p / j L i

y t ~ , - f j o o .

4:

c. 100, — 100.

2/3 100:

— 2 1/2 100 100 100

— 100 100 100

100 100 100

100 100 100 100

100 100 100 100 100

100 100 100 100

100 100 100

— 100 100 100

100 100 100 100

100 100 100 100

4:

100 100 100 100



Dre D, n l e,  
er, d l en g l,  
Dre D c l l,  
- 9 2, l' l,  
e, d, d n,  
e ~ l l l l?

l l l.

l l l.

l:

2 l l l l

l l l, - l l l l:

l l l l - - - l l

l l l.

- l l, l l l l l,

l l l l, l l l l.

# GARTEN

wurde ~ lge re,  
wurde ~ lge los - a gge.

wurde:

1. b - c, e d - x - z l,  
2) b, d, y u.  
~ w a: - f l,  
e w l y u;  
1. c o, y, e l i n u  
2. r e p l i k t n.

l:

~ w l e r, ~ c l u k l  
o - c o r d.  
~ b r e.



WWT:

WWT / 10 / 16 - 20?

6 - 28; - 2!

20 1/2 - 20 1/2

22 2/3

22 - 4

WWT:

- 1, 2, 2, 1, 1, 1 - 10 1/2

WWT:

1, 2, 2 - 10 1/2

20 1/2 - 20 1/2

- 20 1/2 - 20 1/2

WWT:

20 1/2 - 20 1/2

- 2-2 l p, d j f h;  
d n d, u o f z,  
- j o n g f e n j h j z h;  
e o j n r c y h.

u f h o:

2 l o o, e f c.

w d:

e, o f z, u n j z f.

n<sup>2</sup> - 4.

w n t:

h, e ~ n, e<sup>2</sup> b!

1, 2 l: j, p l;

- 1, 2 l e 2 l;

b<sup>2</sup> g o h, o 1 v.

Q:

— 16! 2, com → 10! 2,  
• 10 → — 10!

Wnt:

0!

Q:

D, e, l, e, p, e  
10 - m, 2, 10!  
e, e, 10, 10!  
10 - m, 2, 10!

Wnt:

e, e, 10, 10!  
10 - m, 2, 10!

6:

$\wedge^e c f m?$

was:

$h, i \text{ of } \rightarrow m,$

$- \text{el} - \text{b} - \text{oz} - \text{o}.$

$12 \sim m; 20 \sim h, b, f, m$

$- \sim \text{h} - \text{h} - \text{p} - \text{g};$

$- \sim \text{u} - \text{u} - \text{u} - \text{g}$

$- \sim \text{u} - \text{u}!$

$106 \text{ h} - \text{o} \rightarrow \text{ff} - \text{m};$

$1 \sim \text{f} - \text{f} - \text{h} - \text{h} - \text{h};$

$2 \sim \text{h} - \text{h} - \text{h} - \text{h} - \text{h};$

$\sim 2 \text{ h} - \sim \text{h} - \text{h} - \text{h} - \text{h}.$

$\text{el} - \text{h} - \text{g} - \text{g} - \text{h};$

$2 \text{ h} - \text{h} - \text{h};$

$2 \text{ h} - \text{h} - \text{h}.$

$1 \text{ h} - \text{h} - \text{h} - \text{h} - \text{h};$

дэсэм дэсэм,  
— хавтэ.

Ц:

— н, сөп.

www:

1/1-5, -2/1-1/1.

- а дэсэм дэсэм.

1/2, 1/1, 1/1,

— сөсөсөс,

- бэс дэсэм, д-д.

сөсөсөсөс,

сөсөсөсөсөс,

— дэсөсөсөс,

дэсөсөсөс, — сөсөсөс

сөсөсөс, сөсөсөс

сөсөсөс, сөсөсөс.

4:

expedieren

Wort:

expedieren

expedieren

expedieren, -ieren

expedieren

expedieren, -ieren

expedieren, -ieren

-ieren, -ieren

-ieren, -ieren

expedieren, -ieren

-ieren, -ieren

expedieren, -ieren

expedieren, -ieren

expedieren







Q:

$g \sim \rho, \tau, \mu, \nu, e,$   
 $\nu_{\mu}, \nu_{\tau}, \nu_{e}$

W:

$\sigma, \tau, \mu, \nu, e, \rho.$

Q:

$-g, \gamma, b, \ell, \nu, \mu, \tau,$   
 $W, Z, H, \nu_{\mu}, \nu_{\tau}, \nu_{e}$

W:

$\nu, e, \mu, \tau, \nu_{\mu}, \nu_{\tau}, \nu_{e},$   
 $W, Z, H, \nu_{\mu}, \nu_{\tau}, \nu_{e},$   
 $W, Z, H, \nu_{\mu}, \nu_{\tau}, \nu_{e},$   
 $W, Z, H, \nu_{\mu}, \nu_{\tau}, \nu_{e},$   
 $W, Z, H, \nu_{\mu}, \nu_{\tau}, \nu_{e},$

29 on line / x.

$\rho \in \partial(\Gamma, \mathbb{C})$

$\Gamma \rightarrow \mathbb{R}^n$  /  $\mathbb{R}^n$  /  $\mathbb{R}^n$  /  $\mathbb{R}^n$ ;

$\rho \in \partial(\Gamma, \mathbb{C})$ ,

$\rho \in \partial(\Gamma, \mathbb{C})$ .

Q:

$\rho \in \partial(\Gamma, \mathbb{C})$ !

WNT:

$\rho \in \partial(\Gamma, \mathbb{C})$ !

$\rho \in \partial(\Gamma, \mathbb{C})$  /  $\rho \in \partial(\Gamma, \mathbb{C})$  /  $\rho \in \partial(\Gamma, \mathbb{C})$  /  $\rho \in \partial(\Gamma, \mathbb{C})$ !

Q:

$\rho \in \partial(\Gamma, \mathbb{C})$ !

WNT:

$\rho \in \partial(\Gamma, \mathbb{C})$ !

Q:

Q?

WWS:

21/1  $N \cdot P_e$ .

6  $\theta - v - r$ .

Q:

covered by?

WWS: (2 step)

$\setminus N \cdot P_m \setminus P /$ .

Q:

by 2 also 2  $\theta \cdot P /$ !

WWS: (L/P)

$N \cdot P_m / m \setminus P_m / m$

e.g.  $u = \alpha_0 + \alpha_1 x + \alpha_2 x^2$   
-  $N=2$ !

Q:

1, 2  $\rightarrow$   $N=1$  or  $N=2$   
or  $N=3$  or  $N=4$ !  
y.e.,  $\alpha_0, \alpha_1, \alpha_2$  -  $N=2$ !  
-  $N=2$  or  $N=3$ .

WWT:

$N=2$ !

Q:

-  $N=2$  or  $N=3$ ;

or  $N=4$  or  $N=5$

coeff 2:

$y = \alpha_0 + \alpha_1 x + \alpha_2 x^2$

$y = \alpha_0 + \alpha_1 x + \alpha_2 x^2$

$\mathbb{R}^n \times \mathbb{R}^k \rightarrow \mathbb{R}^m$

$\sim, \sim \mathbb{R}^n \times \mathbb{R}^k$

$\text{rank}(Df, Dg, Dh) = \dim \text{Im}$

$\sim \text{rank}(Df, Dg, Dh) = \dim \text{Im}$

wp:  $(\sim \mathbb{R}^n)$

$\sim \mathbb{R}^n$

wp:  $\mathbb{R}^n$

$\mathbb{R}^n \rightarrow \mathbb{R}^m$

wp:

$\mathbb{R}^n \times \mathbb{R}^k \rightarrow \mathbb{R}^m$

$\sim \mathbb{R}^n \times \mathbb{R}^k$

$\sim \mathbb{R}^n \times \mathbb{R}^k$

$\sim \mathbb{R}^n$

$\sim \mathbb{R}^n \times \mathbb{R}^k$

- unvollständige Induktion  
- 5 Ah!

df. 60:

• ~ n e / g l n.  
y<sup>2</sup> o u t z!

ws:

\ z / r p n.

df. 60:

- b R D. e · d · d.

# EIN GARTENHÄUSCHEN

wurde f(2, f) 2, 1, 1,  
2, 1, 1, 1, 1, 1 - 2/1, 1, 1.

wurde:

1, 1, 1!

1, 1, 1!

1, 1, 1, 1 - 1, 1, 1, 1!

1, 1, 1!

1, 1, 1.

wurde: (1, 1, 1 - 1, 1, 1, 1, 1)

1, 1, 1, 1, 1, 1, 1!

1, 1, 1, 1, 1, 1.

cf: (ppc)

ca ca?

cf: lo.

ca ca!

cf:

ca ca!

cf: lo.

ca ca / ca ca.

ca: (ca)

ca, ca, ca, ca.

cf:

ca, ca, ca?



WNL:

12<sup>x</sup> D m NC!

U:

2012 22!

NC!

WNL:

e!

WNL:

5 6 7 8 9!

U - 2 3 4 5 6 7 8 9

WNL:

U 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

$yz \rightarrow p_1 \sim p_2$

-  $o_1 \sim o_2$

$v \sim v^c$

$u, c \sim v$

$u$

# WALD UND HÖHLE

4.

sin 2b, 9 w v, w v so,

cu + u. 9 v / w d

e n p l s p o e i.

w v, z n n j n d,

u, b / b, j p o. /

n f r e b w d e t,

r u b v, z n d l f

o z ~ u o l e / j i

e l b, z i v o n

u v u - d p r l e n

R e g e n y, z d - c o m m.

- c i f n R c e l f - m d,

, o l l g y e d u b t

- d u g e l y e o f l

- m l e g z - n e n d,

erbeten / beten, f  
Verb, -en mit  
präteritum).  
-gt -winnen  
voll<sup>re</sup> 2<sup>o</sup>, zu v  
Stellen, o<sup>2</sup> l<sup>2</sup> y  
- abh<sup>re</sup> f<sup>2</sup> s  
-ren M<sub>3</sub> f<sup>2</sup> b.

- e<sup>2</sup> u<sup>2</sup> i<sup>2</sup> er<sup>2</sup> no<sup>2</sup>,  
f<sup>2</sup> e<sup>2</sup> u<sup>2</sup> w<sup>2</sup> / o<sup>2</sup> c<sup>2</sup>,  
i<sup>2</sup> p<sup>2</sup> ~ z<sup>2</sup> m<sup>2</sup> s<sup>2</sup> - s<sup>2</sup> w<sup>2</sup>,  
v<sup>2</sup> ~ f<sup>2</sup> s<sup>2</sup>, ~ i<sup>2</sup> j<sup>2</sup> / z<sup>2</sup>  
m<sup>2</sup> n<sup>2</sup>, c<sup>2</sup> s<sup>2</sup>, n<sup>2</sup> - p<sup>2</sup>,  
p<sup>2</sup> - v<sup>2</sup> b<sup>2</sup> w<sup>2</sup> - j<sup>2</sup>,  
z<sup>2</sup> s<sup>2</sup> c<sup>2</sup> d<sup>2</sup>, e<sup>2</sup> m<sup>2</sup> o<sup>2</sup>.  
- M<sub>2</sub> z<sup>2</sup> f<sup>2</sup> ~ o<sup>2</sup> l<sup>2</sup> s<sup>2</sup>  
D<sup>2</sup> h<sup>2</sup> z<sup>2</sup> u<sup>2</sup> v<sup>2</sup> p<sup>2</sup> l<sup>2</sup> z<sup>2</sup>.

-  $h_1$  Sure /  $p_0$ ,  
-  $p_0$   $h_1$  Sure.

df  $h_0$  /  $s$ .

df  $h_0$ :

$\sigma_1$   $\sim$   $\text{bell}$   $\sim$   $h_1$  /  $h_2$ ?  
 $\sigma_0$   $\sim$   $h_1$   $\sim$   $h_2$ ?  
-  $c$   $h_1$   $e$   $h_0$   $\sim$   $h_1$  /  $h_2$   
 $e$   $h_1$  /  $c$   $\sim$   $h_2$ !

df:

$h_1$  /  $h_2$   $\sim$   $h_1$  /  $h_2$ ,  
 $\sigma$   $h_1$   $h_2$  /  $c$ .

df  $h_0$ :

$\sigma_1$   $\sim$   $h_1$   $\sim$   $h_2$   $\sim$   $h_1$ ,  
 $e$   $h_1$   $h_2$  /  $c$   $\sim$   $h_1$ .

$\sim \sigma^{\text{par}}, \beta^{\text{el}}, \omega^{\text{L}}$

$\cdot \text{con } \omega^{\text{L}} \text{ con}$

$\sim \text{up } \omega^{\text{L}}, \text{ con}$

$\text{con } \beta^{\text{el}} - \text{con } \sigma^{\circ}$

$\sim \omega^{\text{L}} \omega^{\text{L}} \omega^{\text{L}} \omega^{\text{L}} \omega^{\text{L}}$

6:

$e = \frac{1}{2} \cdot \beta^{\text{el}}$

$\sim \text{con}, e, \beta^{\text{el}}$

7:

$\sigma^{\text{el}}, \text{ con}$

$\text{con} \rightarrow \beta^{\text{el}}$

$\text{con } \omega^{\text{L}} \text{ con}$

$\omega^{\text{L}} \omega^{\text{L}} \omega^{\text{L}} \omega^{\text{L}} \omega^{\text{L}}$

$-\text{con}, -\text{con}$

$\text{con } \omega^{\text{L}} \text{ con}$

$\text{con } \omega^{\text{L}} \text{ con}, \text{ con}$

Do - 22/10/20  
coz - 10/10/20 - 10/10/20  
o - 10/10/20  
- 22/10/20  
expl - 10/10/20

6:

10/10/20  
10/10/20  
10/10/20  
10/10/20

10/10/20

10/10/20  
10/10/20  
10/10/20  
10/10/20  
10/10/20





0 2 2 1 e / o

g b j E y k

- , c d - n , g k

z L y - e n d - 2

m e ! e n d e f e n ,

- e o ' r n - k

g n d r n / e 2 o ,

o j o p s d l r .

t n e r o g y l o ,

o s p p r z ~ d e y t ;

g j b r n o z y p o ,

n i e d e e o l .

p o n t , y f i z e n j l u ,

p ' , 2 2 o n n z ,

e n e h t e y

l o k y l u .

1 y ' r n e n ;

o g r a l d , o , c e n p

81.  $\int \frac{1}{x^2} dx$

»  $\int \frac{1}{x^2} dx = -\frac{1}{x} + C$

$\int \frac{1}{x^3} dx = -\frac{1}{2x^2} + C$

$\int \frac{1}{x^4} dx = -\frac{1}{3x^3} + C$

$\int \frac{1}{x^5} dx = -\frac{1}{4x^4} + C$

$\int \frac{1}{x^6} dx = -\frac{1}{5x^5} + C$

$\int \frac{1}{x^n} dx = -\frac{1}{(n-1)x^{n-1}} + C$

9:

$\int \frac{1}{x^2} dx = -\frac{1}{x} + C$

10: (1)

$\int \frac{1}{x^2} dx = -\frac{1}{x} + C$

11:

$\int \frac{1}{x^2} dx = -\frac{1}{x} + C$

$\int \frac{1}{x^3} dx = -\frac{1}{2x^2} + C$

$\int \frac{1}{x^4} dx = -\frac{1}{3x^3} + C$

1/ε, 2d, w, 6m!

df Co.

co° - a! b 2, e, b, h, h,  
- 2d - 2d b e, j.

6:

1 v 1 2, - c 1 2 - h,  
1 r b 2 10, 2 w  
h, 1 h e j ~ 1 0 2 m,  
c r h r 2 w.

df Co.

2 c, 2 b c! 1 2 1 h e e  
2 j h, e h o c e.

6:

h, 2!

2/3 lo:

2-1/2, -1, 20 D.

2-1, 4-20 D.

2-1/2 ~ 20 D.

20 D.

2-1, -1 ~ 20 D.

2-1 ~ 20 D.

2-1 ~ 20 D.

4:

20 D.

20 D.

20 D.

20 D.

20 D.

20 D.

20 D.

20 D.

$\rho_2 \rho_1 s^2$   $\sim$   $\rho_1 \rho_2$

$\sim \rho_1 \rho_2$

$\rho_1 \rho_2$

$\sim \rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

$\rho_1 \rho_2$

g. l. ) 2/3 e r e .

- n, c ) l h 2!

e, b e o d - p u - p l l .

9 n z l b e , s ' d

o - l l i g l l .

# GRETCHENS STUBE

W: (a gut, e)

v v' 2,

v v' j i;

v b e b u

- u u.

c, r / 2,

• v e h,

v j d

• v u l.

v u r l

• v u l,

v u r b

• v j d.

✓ 2,2,

~ 2y.g,

, 100 ~ 2

- 222.

DR ~ 2,1

f l d 20,

DR ~ 2,1

e<sup>2</sup> 20.

o 222 n,

o e f,

o v e o n,

o n f,

- o e

μ h o,

o x e,



- D! o no!

2 ↘ 2,

2 2y' z,

1 be 6 ~ u

- ~ u.

2 6 ~ u

J ~ D R 2,

D or l, 6 ~

- 2 ~ r,

- ~ σ r,

— σ, — /,

~ σ ~ σ

m d!



- we on b - o n t u

was:

e / b, u w h u

U:

w u ?

was:

D! c, k o s d n !

g d D / 2 n o u t .

U:

1 ~ b .

was:

d → u .

J w, J u b e n l m .

$z/9 \sim 2^k$

Q:

$z \sim \rho_1, \text{ carbon:}$

$z \sim 2^k$

$z \sim \rho_1 \text{ carbon,}$

$- \sim \rho_1 \text{ carbon}$

$z \sim \rho_1 \text{ carbon.}$

WWT:

$z/9 \sim 2^k$

Q:

$z \sim \rho_1, \text{ carbon:}$

$z \sim \rho_1 \text{ carbon?}$

$- \text{ carbon:}$

$z \sim \rho_1 \text{ carbon?}$

$z \sim \rho_1 \text{ carbon,}$

-) k r

Jan: » r r / k?

- r b,

- r d,

b - d /

d, d, ) b

c d ) - r / e e e?

d, r e / r - b?

- g r b e e

r g r / r?

r r / r r e,

- r / e

d d - r r e,

- d r m p w

f u b u r e?

b e e e r y, - l o -;

- c e r y z<sup>2</sup> b d b,

r - e, o e -;

$\sim \alpha! \beta! \gamma! \delta! \epsilon!$

$12 \sim \dots$

$el! \beta! \epsilon! \dots$

$\sim \alpha! \gamma! - \delta!$

$\sim \alpha! \epsilon! \delta! \gamma!$

*WML:*

$e! \epsilon! \delta! \gamma! - \alpha!$

$\gamma! \delta! \epsilon! \alpha! \delta! \gamma!$

$\rightarrow \dots$

*U:*

$\sim \alpha! \epsilon! \delta! \gamma!$

$\sim \alpha! \gamma! \delta! \epsilon! \alpha!$

$\sim \alpha! \gamma! \delta! \epsilon!$

$\sim \alpha! \gamma! \delta! \epsilon!$

www:

020 - 21, 26. 2. 2003,  
für die  
eigenen.

U:

10. 10. 2003

www:

- 4. 10. 2003,  
eigenen.

U:

0 - ?

www:

- 2. 10. 2003,  
eigenen.

- 2 v 2 2 2 2  
- 1 2 2 2 2 2 2 2  
2 2 2 2 2 2 2 2

6:

2 2, 2 2 2 2!

2 2 2:

2 2 2 2 2 2 2 2  
2 2 2 2 2 2 2 2  
2 2 2 2 2 2 2 2  
2 2 2 2 2 2 2 2  
2 2 2 2 2 2 2 2  
2 2 2 2 2 2 2 2

6:

- 2 2 2 2 2 2



www:

—  $\sqrt{120} \approx 10.95$

$\approx 10.95$

$\sigma, \mu$  —  $f(x)$

—  $2\sigma$

$\approx 21.9$

—  $f(x)$

$e, \ln$

$v^{\sigma}$  —  $c$

—  $\sigma$

—  $\sigma$

cf:

$e \approx 2.718$

www:

$e \approx 2.718$

$e, c$  —  $v, \sigma$

$z_1 \rightarrow z_1 \cdot K^p / v.$

$D, C, e_i; \sqrt{1} \sim u_i$

$- e^b v_{10} z_2 i;$

$e, z \cdot p, z_0 - D - \sigma.$

$\zeta:$

$e_0 \sim \sqrt{K}!$

$w_{11}:$

$z_0 \sim l.$

$\zeta:$

$D_{11} \sim$

$\sim \sqrt{2} \cdot \sigma \cdot a \cdot b \cdot z$

$- \zeta \sim \zeta - \sigma \cdot z \cdot \sigma \cdot \sigma?$

$w_{11}:$

$D_{C_1} \rightarrow \sim \sqrt{K}!$

1. P or m 2, N ~ P. h;  
2. 2 2 2 2 / h,  
- 2, 1, 1, 1, h,  
1, 2, 2, 2, 2, 2!

4:

g r, e 2 2 ~ 1.  
x ~ 2 h!  
e h ~ 2 m h 2 2  
2 2 2 2 2, 2 2.

2 2 2:

2 2 2, 2 2 2?  
- 1, 2 2 2 / 2 2!

4:

2, 2, 2, 2, 2, 2 - 2 2?

www:

o, p, u, v, w,  
c, o, l, c, o, r, D, e, r, u, l, d,  
1, 2, 3, 4, 5, 6, 7, 8,  
e, v, j, l, b, i, r, s, u, d.

1.

u, l, f, l, o, o, s.

u, l, f, l, o, o, s.

\ b, o, l, !, \, c, r, ?

l, f, :

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

u, l, f, l, o, o, s.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

2b, -°mcuu.  
re<sup>2</sup> domb,  
r r l - fl D D U.  
ben: el, es, l d, J u D.

6:

g p z b l ~,  
o r l z k o  
S M z u ~,  
` z y e  
r o d l c ; ) z d l e,  
e b ~ b z u e n z d °.

2b lo.

g s o o o l u,  
~ z u e n d l d.

6:

g f p - l s e - l z!

2 f l o:

- , b ~ v y 1 6 2 b :

z z ~ m d e , b c o / o ,

z z o h e c o t e i n b ;

b b , e , z y b ~ z ,

f c n i l o :

z , z z l m ?

6:

c o n d o ~ ?

2 f l o:

z , d z l e n !

# AM BRUNNEN

W-Druck.

Dr:

2) 1/2 Druck

W:

1/2 Druck

Dr:

1/2 Druck

1/2 Druck

1/2 Druck

W:

1/2

Sh:

-gut!

6  $\text{b} \sim \text{f}$ ,  $\text{c} \sim \text{b} - \text{hd}$ .

Wh:

D!

Sh:

—  $\text{b} \sim \text{r} \sim \text{c} \sim \text{m}$ .

$\text{c} \sim \text{r} \sim \text{b} \sim \text{m} \sim \text{p} \sim \text{u}$ !

$\text{c} \sim \text{r} \sim \text{p} \sim \text{u}$ ;

$\text{r} \sim \text{c} \sim \text{b} \sim \text{m}$ ;

$\text{r} \sim \text{b} \sim \text{c} \sim \text{m}$ ;

$\text{r} \sim \text{b} \sim \text{r} \sim \text{c} \sim \text{p} \sim \text{u} - \text{c}$ ;

$\text{c} \sim \text{r} \sim \text{c} \sim \text{p} \sim \text{u} \sim \text{r}$ ;

$\text{c} \sim \text{r} \sim \text{c} \sim \text{p} \sim \text{u}$ ;

$\text{p} \sim \text{u} \sim \text{r} \sim \text{c} \sim \text{p} \sim \text{u}$ .

$\text{c} \sim \text{p} \sim \text{u} \sim \text{r}$ ;



ei en Deuht a!

Wh:

en en!

Wh:

u<sub>st</sub> b J n!

c I o n p u a,

J n b, r<sub>n</sub> / 2 d<sup>0</sup>,

g c b l n<sub>u</sub> l<sup>0</sup>;

s' m m - p e m n

a e m n g e j n.

e n b e j e m n,

p e m n e h n h o l!

Wh:

~ n<sub>0</sub> p o j o h.

Sh:

1.  $\sim \sim \sim ! \sim \sim \sim \sim$

2.  $\sim \sim \sim \sim \sim \sim$

3.  $\sim \sim \sim$

Wh:

$e \cdot \sim \sim !$

Sh:

$\sim \sim \sim \sim \sim \sim \sim \sim$

$e \sim \sim \sim \sim \sim \sim \sim \sim$

$\sim \sim \sim \sim \sim \sim \sim \sim$

1.

Wh: ( $\sim \sim \sim \sim$ )

$\sim \sim \sim \sim \sim \sim \sim \sim$

$\sim \sim \sim \sim \sim \sim \sim \sim$

$\sim \sim \sim \sim \sim \sim$



# ZWINGER

z'z2 ~ obel' me. o, wra.

W g/ff wra.

D ~ z,

g z p r,

e s p r r ~!

e z / p z p,

z l e z p

w b s j e o o o l e.

j s u w b e,

- o g z b e,

z s r o' - e ~!

с в 1,

о о 1

з у в р п 1

с о з н о з у з о м 1,

с о - п л 1, с о м 1,

с б - е, - е - м 1

с а 1, м р

о о 2, о о 2, о о 2

г в р о з 1

г в, Д! н - м,

г в, г в, г в,

е з у п л 2 в.

г з н - з л д

г з 2 л н, Д!

о 1, н р з н

о 1, н р Д.

г 2. 22 22

1. 0 22 22,

00 1 2 22 22

22 22 22 22.

22! 22 22 22 - 22!

22 22,

22 22 22,

22 22 22 22 22!

NACHT

fo - W. n

Lehr o-er, W. o. le.

c1 - o o v r p,

c u h ) w n v,

- , p u v ~ l

\ v h , f o ,

2 r z o e r g d,

~ u n g p d,

o , z r b n ,

2 \ . ^ z e n y

- f z b e r w

- r e - z o / x

- o : z o D o \!

n i - R z p x,

1, 2 h h z l,

12 жб есб ✓ б.»

✓ б! ✓ б! н! н! е н н;

1 н жу: » 3 б,

б: 1 ж Суп пл.»

есб 2 1 н жу

- н! м 2 2) - пл

- н ~ о н 2 пл! м

2 плер, н о пл

° тер жу н в пл!

° о ~ о жу о пл

✓ тер жу н в пл!

- 2 б 1 б о

✓ 1 б 2 / н 2 о.

с о н / 2! с о ж б а?

1 1, - 2 н ж.

• 2, 2 б н н н

° / н о ж! ж!



U. d. G.

U:

as<sup>2</sup> b<sup>2</sup> c<sup>2</sup> d<sup>2</sup> e<sup>2</sup> f<sup>2</sup>  
a<sup>2</sup> b<sup>2</sup> c<sup>2</sup> d<sup>2</sup> e<sup>2</sup> f<sup>2</sup>  
- p - p o c e w,  
- b<sup>2</sup> e<sup>2</sup> v o v!  
- a<sup>2</sup> v v v o v.

U. d. G.

- v b<sup>2</sup> c<sup>2</sup> d<sup>2</sup> e<sup>2</sup> f<sup>2</sup>,  
e<sup>2</sup> b<sup>2</sup> c<sup>2</sup> d<sup>2</sup> e<sup>2</sup> f<sup>2</sup>,  
j o e v v v v f<sup>2</sup>;  
v b<sup>2</sup> c<sup>2</sup> d<sup>2</sup> e<sup>2</sup> f<sup>2</sup>,  
~ b<sup>2</sup> c<sup>2</sup> d<sup>2</sup> e<sup>2</sup> f<sup>2</sup>, ~ b<sup>2</sup> c<sup>2</sup> d<sup>2</sup> e<sup>2</sup> f<sup>2</sup>.  
- p / v j p e v  
i, v c e v v v.  
i, v j v v v v e,

second, second.

Q:

$\sqrt{c} \cdot \gamma^2 \sim 1, 2, 3,$   
 $\sim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,$

df. Co.

$g \sim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,$

$e \sim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,$

$1, 2, 3, 4, 5, 6, 7, 8, 9, 10,$

$2, 3, 4, 5, 6, 7, 8, 9, 10,$

Q:

$1 \sim 2, 3, 4, 5, 6, 7, 8, 9, 10,$

$2 \sim 3, 4, 5, 6, 7, 8, 9, 10,$

df. Co.

$1 \sim 2, 3, 4, 5, 6, 7, 8, 9, 10,$

so - 1/5 Cmpn.

6:

— 1/10 v 4 - 03,

01 - 1/10 v 1 - 10.

2/3 60:

1/10 v 1 - 10,

2/10 v 10 - 10.

3/10 v 10 - 10,

4/10 v 10 - 10.

5/10 v 10 - 10,

6/10 v 10 - 10.

7/10 v 10.

8/10 v 10

9/10 v 10,

10/10 v 10

u m n s r i

o, o, o!

u b d ~

o r e h ~,

o r e h / p.

u l / j = R!

· - M,

e n j R'

^ n u, n u e n!

o r / j,

h n e d

→ j p

o r i r n l u.

Leop: (H ~)

a b e g r i u r u!

r e l s l u!

$\int \frac{1}{x} dx = \ln|x| + C!$   
 $\int \frac{1}{x^2} dx = -\frac{1}{x} + C!$

*uf*  $\int \frac{1}{x} dx$ :

$\int \frac{1}{x} dx = \ln|x| + C!$

*uf*  $\int \frac{1}{x^2} dx$ :

$\int \frac{1}{x^2} dx = -\frac{1}{x} + C!$

*uf*  $\int \frac{1}{x^3} dx$ :

$\int \frac{1}{x^3} dx = -\frac{1}{2x^2} + C!$

$\int \frac{1}{x^4} dx = -\frac{1}{3x^3} + C!$

$\int \frac{1}{x^5} dx = -\frac{1}{4x^4} + C!$

$\int \frac{1}{x^n} dx = \frac{1}{1-n} x^{1-n} + C!$

*uf*  $\int \frac{1}{x} dx$ :

$\int \frac{1}{x} dx = \ln|x| + C!$

ulf lo:

en e /?

Leur:

D ~!

ulf lo:

po!

Leur:

120' L L P!

co' e d' j', x e v n.

ulf lo: (j l)

f o j!

Leur: (L /)

— co!

uf lo:

~i' R p!

~u P! r v o r j g e

e r j g e ~ r e n f.

r e o p h e r' C f,

e r r e u e r j e r p y l e r.

wp: (n l d)

2o! 2o!

W: (n l d)

x ~ R!

wp: (o ~ u)

u r j - l l, u r j - l l.

L:

e r j g e ~ u!

W2: (20/10)

120, 200, 300, 400?

W2: (20/10)

120, 200?

L2:

120, 200:

W2:

120, 200, 300, 400?

L2:

120, 200, 300, 400?

120, 200, 300, 400?

120, 200, 300, 400?

120, 200, 300, 400?



• k r r.

~ W, P! e b J L,

b r J / p r,

W e b z p l.

1 o e r k h ~:

e b d ~ ~ r - z,

- ° D m l!

W:

~ k e! z! c o v e!

L:

o i z r r e<sup>2</sup> p o!

p i k ~ r p

- o - r e r, - ° r e.

e b d ? r z r ~

l r ~ r ~ r h,

- c d h ~ e y e z,  
- o d h, n y f d.

c h, y e f m,  
r b z n / d p l,  
- u p ~ z u i n l  
r s n l - m;  
h, u r l o m n e.  
d b o n - n l o,  
e n b d l n o  
- o d / z u f.  
L o o r r p l,  
L u o b o n o l.

r o c o r g, f,  
e - l l u n n,  
o s ~ y f l ~ h,  
S e, e y j! o n l.

0° 22y R. 2 yu,

060 2, 2 02!

0 ~ 2 2 2 2 2 2!

2 2 2 / 2 2 2 2!

2 2 2 2 2 2 2

0 / 2 2 2 2 2 2!

2 - 2 2 2 2

2 2 - 2 2 2 2,

2, 2 2 2 2 2 /,

2 2 2 2 2!

2 2 2:

2 2 2 2 2 2 / 2 2!

2 2 2 2 2 2 2 2!

2 2 2:

2 2 2 2 2 2 2 2,

2 2 2 2 2 2 2!

es ist ein 2er  
mit 20/10er.

W:

2 1/2! 2 1/2!

L:

1 2, 0, 1 2 0!

es gibt 1/2 ~ 1/2,

1/2 ~ 1/2 2/2 0.

1 2 1 ~ 1 2 1

1 2 1 ~ 1 0 1 - 1/2.

gld.

# DOM

$n, n-p$

the 1st row is 2nd of the

row:

0, 1, 2, 3, 4,

5, 6, 7, 8, 9

10, 11, 12

13, 14, 15

16, 17,

18, 19,

20, 21, 22!

23!

24, 25, 26?

27, 28

29, 30!

dele nos,  
p d / n, n C 2 x p i  
se zu co u?  
m - l e r z p  
A j / B e z  
- n d o p - )  
2 n z o n m d ?

22:

co! co!

C i j n o,

, v 2 x - 2 x 2

E v!

2:

Dies irae, dies illa

Solvat saeculum in favilla.

~nd.

Co 26:

n. 66 d!

, Co 26!

, n. 66!

- e 27,

o 27

1/2 27

E 27,

W 27!

W 27:

Co 27 01!

v; o 27, ~ 27

~ n 27,

p 27 27

n 27 27.

2:

Judex ergo cum sedebit,  
Quidquid latet adparebit,  
Nil inultum remanebit.

W:

v' — n!

1, 2, 3

4, 5, 6

e, f, g

h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z

W 2 b:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200

201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300

301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400



2:

Quid sum miser tunc dicturus?

Quem patronum rogaturus?

Cum vix justus sit securus.

26:

1/2000

1/2000

1/2000

1/2000

1/2000

2:

Quid sum miser tunc dicturus?

26:

1/2000

1/2000



# WALPURGISNACHT

2 pp. me Sp. - re.

cf. 2/3 lo.

2/3 lo.

und y / D / uog?  
1. auf v ~ ernt l.  
s r o r 2 r 2 c / Sp.

cf:

— r, v / D / s r r l u b,  
r / v r m r g r.  
c o s l l, e r ~ o r u f ! m  
r. u r t ~ l u a p p l,  
e r o l e r / y r,  
s r ~ l. ) o f e r e g d,

e: 1, 6, 12 le of!

- b, 12, 2 ~ um,

- b, 12, 2 r; i

d, 12, 2 r um?

df lo:

le, 1, 2 r!

v: - 12, 2,

1, 12, 2 - 12, 2 u.

12, 2, 1, 2, 2

12, 2, 2, 2, 2

- 12, 2, 2, 2, 2

12, 2, 2, 2, 2!

12, 2, 2, 2, 2!

12, 2, 2, 2, 2.

12, 2, 2, 2, 2, 2, 2?

12, 2, 2, 2, 2?

12, 2, 2, 2, 2!

*nl:*

o r b l, z l, ° - v p u,  
v n o n u j p u,  
v p u p u s l.

*nl:*

! ! ! - e n t ~ v g n d p u.  
v - t e, i o l e n u!  
o d u, p o b u n e.

*nl:*

1 m c, r - e - n l 2,  
- - v m d s l u.  
e n t ! - w i z z j u t.  
- c ~ n l j, o r c o o  
- v p - p s l u.

U, v, w, x, y, z: (P dopr)

z, h - j, d, v

z, i, j, k, l, m, n

h, i, j - d, o, v

e, r, a, u, w, p, r

z ~ c, h, u, i!

o, i, k, d, l, w

o, b, j, u, s, n,;

-, i, n, h, i, j, o, n,;

-, i, n, l, e, n, o,;

o, b, j, u, s, o, b, l, o,!

p, i, f, u, p ~ v

— 10 - 12 7.

z ~ 1 y? z ~ 1 h?

z ~ 1 2 e, h, o, n,;

j, u, l, i, s, t, e, n,;

o, i, 2 h, o, i, s, t,!

-e D, 0, 1, 2

• f, 2, 1 E.

» 2! 2! « L - ~ 2,

γ - 2! - 2 2,

2 6 - D! 2!

2 e 2 D e f 2!

~ L, 0, 1 2!

- 1, 0 f, 0, 2 2,

0 2) 0 6 - 0 2,

f u c c u 0 2,

2 / f u, 2 / 2 u;

0 2 2 u 2 0

f u 0 2 2 0

D<sup>2</sup> 0 2 - 1, 2 0

4 0 2 2, 2 u 0,

1 0 2 0 - 1, 2 2!

- 1, 2 u 2 2

z p r z r p r  
j o v e r p r

u o v, r i p r  
u r r c n?  
e o, e o z l j o r,  
l o - l r, i p r  
z e, -, m l r,  
i j m, i j e r.

u l f l o:

l o c u r r p l!  
r - ~ l r  
c u l y p r o,  
o r u w' n ~ r.

l f:

o o p r w p, r e





2 v ~ 10 ~ 6.6?

~ 2, 6.6, 2, 3,

1, 2, 3, 4, 5, 6.

6:

0.6, 0.6, 1, 1!

2, 2, 3, 4, 5, 6, 7, 8, 9, 10!

1/2 6.6:

4, 2, 6.6, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

0.6, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

~ 1, 2, 3, 4, 5.

2, 3, 4, 5, 6, 7, 8, 9, 10!

4, 5, 6, 7, 8, 9, 10, ...

2, 3, 4, 5, 6, 7, 8, 9, 10, ...

0.6, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

10 - 12.6!

1/2 10.6!

'a f u m m - 2 m!

R. W. h. c. m. l.

s. r. h. b. e.

- p. 1, 8, p. 1, 2

p. - 2, 1, 1.

2 b, p. 2, 2, 2?

i. l. u. i. i. i. i.

h. ~ r. p. w. r.

f. d. ~ c. r. p. p.!

*L.*: (R. L.)

, d. j. <sup>2</sup> l. m. p.

, f. l. 2, 1, 0. 1.

e. d. a. j. - 2 0 2,

x ~ r. o. f. u. s.

- u. 1, 8, f. - f.

- b. j. d. i. - g. u. t. - l.

gr:

1.  $\dot{t} \dot{u} \sim \dot{d} \sim$ ,

6  $\dot{v} \dot{s} \sim \dot{r} \dot{z}$ .

2:

—  $\sim e, a \sim \mu!$

b  $\dot{u} \sim \dot{!} - \dot{y} \dot{b}!$

$\sim \dot{N} \dot{z} - \dot{u} \dot{e},$

e  $\dot{L} \dot{d} \sim \dot{y} \dot{B} \dot{d}.$

gr:

c  $\dot{h} \dot{a} \sim \dot{d} \dot{e} \dot{v}?$

gr:

s  $\dot{i} \dot{r} \dot{y} \dot{!}$

e  $\dot{r} \dot{z} / \dot{i} \sim \dot{r} \dot{o} \dot{b} \dot{z},$

1  $\dot{d} \sim \dot{C} \dot{r} \dot{!}$

*gr:*

$\frac{1}{2} \ln \frac{2}{e}$   
 $\cos \frac{1}{2} \ln \frac{2}{e}$

*gr:*

$\ln \frac{2}{e}$   
 $\cos \frac{1}{2} \ln \frac{2}{e}$

*gr, 2:*

$\ln \frac{2}{e}$ ,  $\ln \frac{2}{e}$   
 $\cos \frac{1}{2} \ln \frac{2}{e}$   
 $\ln \frac{2}{e}$ ,  $\ln \frac{2}{e}$   
 $\cos \frac{1}{2} \ln \frac{2}{e}$ ,  $\ln \frac{2}{e}$

*gr, 2, 2:*

$\ln \frac{2}{e}$ ,  $\ln \frac{2}{e}$   
 $\cos \frac{1}{2} \ln \frac{2}{e}$   
 $\ln \frac{2}{e}$ ,  $\ln \frac{2}{e}$

$e \rightarrow 1, 4 \rightarrow 2$

re 20:

$1 \rightarrow 2, 4 \rightarrow 1$

$2 \rightarrow 4, 1 \rightarrow 2$

$3 \rightarrow 3, 1 \rightarrow 2$

$4 \rightarrow 1, 2 \rightarrow 4$

$f: (1, 2)$

$1 \rightarrow 2, 2 \rightarrow 1, 3 \rightarrow 3$

$f: (1, 2)$

$1 \rightarrow 2, 2 \rightarrow 1, 3 \rightarrow 3$

$1 \rightarrow 2, 2 \rightarrow 1, 3 \rightarrow 3$

$4 \rightarrow 1, 2 \rightarrow 4$

re 20:

$1 \rightarrow 2, 2 \rightarrow 1, 3 \rightarrow 3$



$nH, -H \sim$

$c_2 \sim$

$\cdot \sim$

**2.10.1:**  $(\sim)$

$nH, -H \sim$

$c_2, \sim$

$\sim$

$\sim$

**2.10.2:**

$nH, -H \sim$

$\sim$

$\sim$

$\sim$

**2.10.3:**

$\sim$



- f h ~ 2 u a  
- e l, z e c - l  
2 - r z r i d h g  
b. o ) r.

u f b o.

e e l - f b, e y - u l!  
e p l - e l, e p - u l!  
e. u, p l - g u l - u l!  
~ c r o d h u l!  
→ b ~ u ! o d ~ r z p l.  
c b e g?

l f (z' l u s)

z!

u f b o.

c o l e l g z p o i

er<sup>c</sup>, 2/12/20.

Gf. Lm Lc n. d. Gf. 0 Cc, Gf.

x, e, lo v! - n. 2. 2. 2. 2.

0. 5. 2. 2. 2. 2.

- j. L. - n. 2. 2. 2. 2.

e. h. n. 2. 2. 2. 2. 2.

- j. v. c. o. n. d. h. f. 2.

n. 2. 2. 2. 2. 2.

4:

er<sup>c</sup> 2/12/20. → j. e. v. d. v. l. n.

1. e. n. d. e. c. n. 2. 2. 2.

j. l. n. o. n. i. c. e. n. 2. 2.

2. 5. 2. 2. 2. 2.

2/12/20:

er<sup>c</sup> →, d. 2. 2. 2. 2.

- i. n. 2. 2. 2. 2.

Reminiscences.

6:

Dear Mother!

2014 - Oct.

and for the first time;

and to the same.

My love.

Dear Mother!

2014, Oct 1 - 2014,

1 - 2014, 2014.

Dear Mother,

and to the same.

Dear Mother, and to the same,

Dear Mother,

Dear Mother,

Dear Mother,

12 v col fuf Lm!

Bl p! 20) a p.

~ 22 ~ 22 - 1/100,

1/2 - b d 2,

- 1, 10 d 0 2.

code, l e i m m r

es p - 2! 9 b e r e r.

~ 22 / 2 2 2 2

2 2 / 2 2 / 2 2 / 2 2 / 2 2 / 2 2

~ 2 2 / 2 2 - 2 2 2 2!

6:

- 9 d m, 2 2 2 2,

2 2 2 2 2 2 2!

2 2 2 2:

2 2 2 2 2 2, 2 2 2 2,

2 2 2 2 2 2 2 2.

~ mve / 21 / 2,  
d. \ belox m / 2.  
be, zu er: 6 n d 2 y / 2;  
2 m b e p f  
2 b v j c o y / 2.  
c 1 D ; ~ 2 1 x p l.  
~ ! S l 2 m 1 y l 2,  
1 v \ c u, - g b \ l u.  
j ~ 2, 1 2 s v e n e n o f:  
^ S 2 m, c o l l 1 x n r e?  
1 d j, c 1 j 2 y 2 2 l e,  
S o o r p d - l r e b i  
m e n i t e h / 2.

2 m:

c u s n ~ h!  
w 2 j f l o p i  
e u 2 l o u ~ h

g. p. l. h. e. u. n.

u. b.:

h. u. l. s. h. y. c.,  
u. v. u. n. s.;  
u. l. e. s. o. s. t.,  
e. a. s. t. r. e. n. g.

u. a.:

r. a. n. a. d. l. e. r  
- u. s. t. c. o. r. t. s.;  
d. h. u. l. s. o. r. v.  
- u. e. s. t. b. e. s. t. s.

u. i.:

u. v. c. s. d. h. y. p.  
s. b. n. n. s. o. r. !  
- c. o. e. t. h. l. e. n. u. s.,

e: 2 ~ ~ ~ ~ ~

df lo. (s ~ ~ ~ ~ ~)

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

Leob:

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~ ~ ~ ~ ~

~nd, e<sup>2</sup>) / 2 n p e ~  
p e 2 0 v l r o,  
~ z, i / ~ h o o p c e  
h l, ~ z l, e l ~ v e p l z,  
/ x r a l <sup>2</sup> ~ m e y l z.

ul f lo.

b r e ! b g r v g l, f .  
h e, h e ! h e, h e !  
e b ) s ~ s h !  
~ ~ s h g r s ~

U:

e, v p ~ / b r o !  
2 0, v e e ~ v o !

ul f lo.

~ z y f e f l ~ D ~ u ;



es 26/1/2019; - es' p. u.

cf:

ci en el

alg lo:

M b ps!

p. e.

cf:

ci?

alg lo:

es b h.

es d, R ~ r z u z u,

— r z, r z b p h.

es b r ~ h u u,

— b b r ~ e / e h.

6:

es of j, 1, 2, 3, 4, 5  
1, 2, 3, 4, 5, 6, 7, 8, 9, 10

11: 12:

es 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

13: (1, 2, 3, 4, 5)

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

14:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

eD ~ w 2H.

df lo. (2-5)

d1, ~ dh

es 0, ~ f' w

'1 ~ p 0 ;

- 20 - a, b, v, d.

1. f:

1. u ~ 6 20

2. u ~ 2 20!

2. ~ h l l w,

c, e 20 1/2.

L ~ h ab:

Mo L ~ c o f r ~ ?

o ~ r ~ / 100:

~ 2 b g ~ r ~ w ~ 10?

~ h/12, I h/22!

12: (h/2)

co-e's s' u!

6: (h/2)

1! ' h s.

co e' h/2, 20- h/2.

~ / h/2 h/2,

— h/2 — h/2

h/2 h/2, — h/2 h/2.

h/2 — h/2 h/2,

h/2 h/2 h/2

h/2, — h/2 h/2

h/2 h/2 h/2.

Ex h/2:

h/2 h/2 h/2, e' h/2.

$\gamma^{\alpha} \partial_{\alpha} r^2 \sim \gamma^{\alpha} \partial_{\alpha} r^2$   
 $e^{\alpha} \partial_{\alpha} r^2 \sim \gamma^{\alpha} \partial_{\alpha} r^2$   
 $r^2 \sim r^2, \omega^{\alpha} \partial_{\alpha} r^2$   
 $\omega^{\alpha} \partial_{\alpha} r^2 \sim \gamma^{\alpha} \partial_{\alpha} r^2$   
 $\sim \gamma^{\alpha} \partial_{\alpha} r^2; e^{\alpha} \partial_{\alpha} r^2$

*1/2:*

$\sim 2 \sqrt{\partial_{\alpha} r^2} \sim \gamma^{\alpha} \partial_{\alpha} r^2$

*1/2:*

$\omega^{\alpha} \partial_{\alpha} r^2 \sim \gamma^{\alpha} \partial_{\alpha} r^2$   
 $\sim 2 \sqrt{\partial_{\alpha} r^2} \sim \gamma^{\alpha} \partial_{\alpha} r^2$   
 $\sim 2 \sqrt{\partial_{\alpha} r^2} \sim \gamma^{\alpha} \partial_{\alpha} r^2$

*1/2:*

$\omega^{\alpha} \partial_{\alpha} r^2 \sim \gamma^{\alpha} \partial_{\alpha} r^2$   
 $\sim 2 \sqrt{\partial_{\alpha} r^2} \sim \gamma^{\alpha} \partial_{\alpha} r^2$



m, 2, 0 a d / 4  
a b e d 2 - g h f e ?

6:

e o 1 m

u f l o :

o d ?

6:

u f , b e e l

~ u o , z r o r e - l u p e ?

o z u ) r e - l u ,

o z / 2 p o r l o / m .

120 l m , e v e b

e b 2 2 u h 2 l .

2/3 lo:

oe → f! a<sup>d</sup> me c.

i ~ ju<sup>l</sup>; lo, ~ t:

ju/um; / 2:

sgw w gw<sup>o</sup> w gw<sup>u</sup>

- (b<sub>2</sub> f w);

S' re o e t p v.

6:

ba, -<sup>2</sup>, n ~ v<sub>h</sub>,

, - me se / zo.

e: 6, 1, 2, v p<sub>h</sub>,

e: 6, 1, ~, p<sub>o</sub>.

2/3 lo:

e: ju, e, 1, w<sub>h</sub>!

e ter ~ 6 o o p<sub>h</sub> c.



6:

cd - cd! cd ~ er!

in / d r w / z er.

o d r w r z er 20

~ r f ~ r o z r z er,

ll r o ~ r o ~ er!

df lo.

ny ll! r o - r l er.

o r e r d d l i r r h,

er lo o r r r y r.

→ r r r f j er!

~ r d e r r h r,

r f - f o r h

- r r r / r h,

- o r r ~ r h.

co r r er?

red:

Wen

~ so g, e f g s b.

Tj n i a b,

~ e n s, p r

- e n s p r.

f, r n, c, g e

p e n, ~ n g r.

red:

c, r s<sup>2</sup> l a n b e;

e b e, r, e e p r 2.

# WALPURGISNACHTSTRAUM

er

wo-wo  
einzig

my

umb:

zzzzz,

wo-wo.

wo-wo,

einzig!

z.z:

einzig,

einzig

$n: f u,$

$e z e i v u.$

$n:$

$\rightarrow 126, C 10,$

$- f 20 f e i$

$n 1 - 1 n 1,$

$6^2 6 \sim 1 u e i$

$\zeta:$

$n d' (-1) E$

$- f 1 \sim 6 10 \sqrt{2},$

$20 \sim 20 1,$

$) 10 10 / 10 i$

$n:$

$n 10 1 \sim 2$

$2 10 \sim 10 i$

Sty-Loren,  
D.L. Digen.

*nu:*

nu, i) M-  
mo Scler!

c) juber,  
Urb- jze.

*nu:*

z- w- h, h,  
- lb- w,  
lv- D<sup>2</sup> w,  
- r- w- r.

*nu:* (lv- w)

lv- w-  
r- w- r,

$\log R_1 - \log R_2$   
 $e^2, \sqrt{e}$

—:

$\sigma, \epsilon, \sqrt{e}$   
—,  $\sigma$   $\log$   
 $2\sqrt{e}$   
 $\log \sigma$

$2\sigma, \sqrt{e}$

$\log \sigma - \sqrt{e}$   
 $-\log \sigma^2 \sqrt{e}$   
 $\sigma \sim \sqrt{e} \sigma - 1$   
 $\sigma \sqrt{e} \sim \sqrt{e}$

$\sim \sqrt{e}$

$\sqrt{e} - 2\sigma \sqrt{e}$   
 $\sqrt{e} - \sigma$

g e k d v m  
d r o / z, l l.

~ n h ~ o c:

• e / r o n e y ?

o i ~ n h

u, ~ j u z,

D z z r / h ?

~ e b:

~ n, ~ n g y!

d u d - o f l:

- o, r n h u e,

- i, D, ~ L.

~ o j ~ d:

o, r h l, e, z,

l a - o f c o;

0,1  $\rightarrow$  0,2  
1,1  $\rightarrow$  0.

0-1:

0,1  $\rightarrow$  0,2

0,1  $\rightarrow$  0,2

-1  $\rightarrow$  0,2

2  $\rightarrow$  0,2

0-1:

0,1  $\rightarrow$  0,2

0,1  $\rightarrow$  0,2

0,1  $\rightarrow$  0,2

-1  $\rightarrow$  0,2

0-1:

0,1  $\rightarrow$  0,2

0,1  $\rightarrow$  0,2



022, d r h - p  
- o r l, h

red:

022 - vno  
rgr v /, n!  
by r. - b r b,  
- w d r r w!

red: (D'no)

p, o r o r n:  
w r l!  
- h p, r l r,  
i r h o r!

red: (D'no)

- h) / l r s,  
b e / g r,

— 120000  
212000

21:

010 2100,  
21000000,  
01, 21000,  
210000.

21:

01, 010 21000  
210000!  
01000000,  
01000000.

21:

10000000  
21000000;

erl. & d. s.  
s. 20. 2. 1. 2.

2: 0. 2. 1. 2. 3. :

2. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

2. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

d. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

2. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

2. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

2011 ~ 2020  
) 2011 ~ 2020

2011:

2, 6, 12, 20, 30,

40 ~ 50,

60, 75, 90, 100

120 ~ 150:

2012:

2012 ~ 2020?

120 ~ 150

» 120! - 2012

120 ~ 150

2013:

2013 ~ 2020!

120, 150, 2013!

~ 2 1/2; 6 2/3  
- 1/1, 0 - 1.

lev:

2 1/2) 2, 2 1/2,  
- 2 1/2) 2 1/2;  
- 1 1/2) 2 1/2;  
0 1/2) 2, 2 1/2.

enn:

1 1/2) 1 1/2,  
1 1/2) 2 1/2.  
1 1/2) 2 1/2;  
0 2 1/2) 2 1/2.

ev:

1 1/2) 2 1/2  
• 2 1/2) 2 1/2.

la, c, e, o, u,  
— u, i, z, z, ~ d.

red:

eco · v N/E  
— u, p, u, o, o;  
i, p, z, j, k  
l, b, s, z, ~ b.

~~red~~ red:

z, f, w, h, v, i, e  
— l, z, p, z, o;  
e, s, ~ l, h, ~ i, h  
s, z, z, b, z, o.

red:

o, z, ~ b, h, s, i, p,  
— z, i, ~ s, i, z, z.

slb v d y b ~;

ev, N r G.

slb:

ly r a - b r b,

slb v!

l r y - v r s,

r ~ e d r v!

1, p d:

o b [Sanssouci], — e b e z

S. b p l;

r ~ b r s / r,

r r r s ~ r l.

1, p d:

o d r r l r v r f,

r r r l r!

$\pm z^2 y^2$ ,  
relation:

$\mu$ :

$S^2$  of  $n$  units,  
error type;  
 $\partial^2$   $\mu$   $\mu$   $\mu$   $\mu$   
independent.

impl:

$\sigma^2$   $\sigma^2$   $\sigma^2$   $\sigma^2$   
 $\mu$   $\mu$   $\mu$   $\mu$   
 $\mu$   $\mu$   $\mu$   $\mu$   
all variables?

$\mu$ :

$G - G' - \sqrt{\sigma^2}$   
 $- \mu, \mu, \mu, \mu$



$2b \sim u, 2b \sim D,$   
 $62 \text{ } \zeta_2 \text{ } 2b.$

$\zeta:$

$u/ - 2b$

$\sigma - \text{L} \text{ } u,$

$- \text{ } \zeta_2 \text{ } \sim 9 \text{ } u$

$\text{ } \zeta, \text{ } u, \text{ } o \text{ } u.$

$\sim:$

$u, \text{ } u \text{ } \sim u,$

$u \text{ } 2b \text{ } \sim u,$

$u \text{ } \sim u \text{ } \sim u,$

$u \text{ } \sim u!$

$\sim: (u \text{ } b)$

$u \text{ } \sim u$

$u \text{ } \sim u.$

$\mathcal{H} \rho_a - \mathcal{H} \rho_b,$

$- \dots$

TRÜBER TAG. FELD

U. d. f. lo.

U:

r. se! gl. lo! wa s' re n N-  
 br! o v. m. r. m. j. s. g. e. n.  
 g. l., e. z. e. p. l. l. l. ea! ea! m. m. l. f.,  
 r. m. z. b., - e. z. e. v. s. l. m. p. l.,  
 g. l. e. f., l. l. g. n. m. e. r. n. l. z. l. p.  
 l. v. e. e. p. h. m. l. l. m. l. r. p. l. m. s. l.  
 l. o. z. b. m. - l. l. v. e. s. o. w. g. l. -  
 v. d. e. z. z. y. z. l. f. z. l., m. d. v. m. d. v. e.  
 l. u. - d. o. z. l. o. e. m. l.

U. d. f. lo.

6:1, 1/1.

4:

20! 17 20 17! m ce r, e per 20! ce ~  
 a r e 20 20 17, 0. ) l l u c e b,  
 ~ v g l u, 2 200 ce ~, l 0 /  
 ~ ~ ~ ) 2 20 17 5, 20 17 20. ce'  
 ~ e 20 17 17, e. ~ v r ce s 2 0  
 17, ~ 20 17, ~ e l u! m » 17!  
 ~ l u! l u! 17 ~ 20 17 / l 0, e 20  
 ~ 17 2, 17 20 20 17, e / e 17 17 l,  
 20 17 20 17 17 17 ~ 20  
 17 17 17! v d, ~ ~ ~ 17, e 20 17  
 ~ 17 17 17 17 17 17 17 2!

17 17.

~ 2 17 17 ~ 17 17 17, e, c 17 17  
 17 17. ce 17 17 17 17 17 17 17 17  
 ~ 17 ~ 17 ~ 17 17 17 17 17 17,  
 ~ 17 17 17





2/3 60:

1.  $\ln 2, -\cos 1, \ln 2, 2\sqrt{2}, 1, e, \ln 2, 2, -$   
 $5, \ln 2, 0, \ln 2, 5, -1, \ln 2, \ln 2, \ln 2, 2, 5, -$   
 $\ln 2, 2, 2, 2, \ln 2, 1, \ln 2, 1, \ln 2, 2, \ln 2, 1,$   
 $\ln 2, 1, e, \ln 2, 1.$

6:

5 - 6!

# NACHT, OFFEN FELD

$\mathbb{C}_6, \text{df } \mathbb{C}_6, \text{ s. } \text{Zur } \text{Ben } \text{od } \text{oc}$

$\mathbb{C}_6:$

$\text{co } \text{an}, \text{e } \sqrt{2} \sim \text{df}?$

$\text{df } \mathbb{C}_6:$

$\text{co } /, \text{co } \text{b } \sim \text{Z} - \text{Zhu}$

$\mathbb{C}_6:$

$\text{Zhu } 1, \text{Zhu } 2, \sim \text{Zhu } 3, \text{Zhu } 4$

$\text{df } \mathbb{C}_6:$

$\text{— } \text{Zhu } 11$

$\mathbb{C}_6:$

$\text{b } \text{Zhu} - \text{Zhu}$



uf lo:

u! u!

KERKER

62 2000 - 10, 10000.

6:

200 - 10000

10000 - 10000

10000 - 10000

10000 - 10000

10000 - 10000

10000 - 10000

10000 - 10000

10000 - 10000

10000 - 10000

10000 - 10000

10000 - 10000



www: ( ) ~ 2000

be ~ up, - be ~ n.

Q:

g', dh - 2 gl ju!

- lb, nu, b ggo.

www: (s ~ nu)

ca 20 20 9 d

s v pu!

g 2 d v g 2 nu.

ur d - o v pu!

br nu b / g pu?

6 g 15.

u, d 2 - h - h!

- o g pu!

g ca 10, - ca 20 nu.

sa l e n i c ;



asobee?

6: (all) 7)

~ ver der bo,

1 hundlygg.

wm: (all) 1, 2)

1, 0 5 m, 2 in phi!

0! 1 or phi,

1' zu

01, 2 w!

1 0,

2 0 - 100 10,

10 ~ 10!

6: (1)

12! 12!

www: (sma)

ea° L<sub>0</sub> p!

6 p! s. 1. n. l. e. n. v.

c. i. ? 1 2 r h 2 v.

1 v L! v° ~ v e c n.

~ o ~ 2 o - 1 b h,

~ o ~ l o p h!

\ L W h! \ p e s' j u.

2 o 2 ~ - n h' 2 e s,

p ~ p h, L p h 2 ~

v d, ~ o, ~ v e L.

6:

1 v o!

www:

e p! , o - 2 ~ v!

~ l o e. \ p! \ p! c a i. e!

ca, n<sup>o</sup>ms? \ n?

g d! n d, d j n.

1 v n!

j, f o e e

s \ d j f r o s

- \ z \ w

c, - w e e w

cf: (jrc)

n n! n n!

w n n:

- c

c, d - m, c e c b.

n o c.

cf:

->



ce/ab

ca r L 2 10 20.

www:

degn / un 10?

2 lo - n y s v dnd

- 2 10 un?

ca' v ~ e r 20 - un?

cond sen ct, e un

~ n y 2 y v sen

- 2 v 10, 2 - 2 v y n.

10 v!

o d 20, 10!

o r b r.

- 2! e h 2 nd,

2 fi.

c e h

h?

с 11 р 2?  
6001) 1 р.

6:

с 11 р 2, 60 2!  
124 р 2 400 2 4  
→ с 11 р 1, 1 р 1 → 9!

www: (1 р 1 р 1)

- 1 р 1 р 1 - 1 р 1 р 1

6:

1 р 1 р 1

www:

с 11 р 1, 60 1,

с 11 р 1, 60 1.

с 11 р 1, 60 1 - 1 р 1

- c b e r, r l e a e u b e

U:

r u ! r u ! g r l, k n l.

w w l:

r u r u r u r u

r u r u r u r u

a - l e - v p u t ?

e r D. m e y b ! r e - r e

r e r e ! i m h !

e r r e ! m D, r b l !

a b a ! o r e e

i b e.

D r ! c o r e y p u

f r ~ e n ~

r u r e !

4:

o e n n n o,  
e b d p<sub>2</sub>

was:

~ , e r b s n u!

i - o , h d f u,

l, r b g o n

z r n i;

' u ~ b G n,

z l e - z r n,

p ~ a p o ,

→ / n j c!

- e n n v ~ , d l f.

~ o e' o d e v s n! ~

p ~ e o / j z n,

e a ~ o', ~ z l o z!

u - v / n, p n;

$v_i, v_j, v_k, v_l, v_m,$   
 $v_n, v_o, v_p, v_q,$   
 $-v_r, v_s, v_t, v_u, v_v.$

Q:

$v_i, v_j, v_k, v_l, v_m,$

WWT:

$v_i, v_j,$

Q:

$v_i, v_j,$

WWT:

$v_i, v_j,$

$v_i, v_j, v_k, v_l,$

$v_m, v_n, v_o, v_p,$

$v_q, v_r, v_s,$

g r b n l ? , 2 p , 1 2 !

6:

g r ! — — — — — ! , r g l h !

w w w :

1 e r l l ; l v p . 9 / 2 h .

c o s l l , l 2 i b s u n d v s .

- i - r e , u n / v o

- 2 e y l u o p o !

- i - r e , i h e z h

- 6 c v p d l h !

6:

1 6 2 2 e r

w w w :

o c ! o c !

re no re!

re ~ or

re 2s,

s ~ p,

re ~ or 2s,

re, c, l, r, g,

re ✓.

re → ✓!

re → m,

re → j!

re! re!

re:

re re!

re → p, — be!

re:

re → ~ re!

erdr usrg,

- bopndrgl!

erdr usrg

- crl<sup>2</sup>nl

bndl, bndl; ncl.rg,

bgl - r, bdl/r.

bgl, d r s l r i

- crnrg!

U:

all r n b r, all n o r,

- cr p, d r o r n.

wnr:

or! n, r n r p!

bdl - r r d n!

o d r o r h o r p.



6:

\ n 4, 12, 12!

was:

n! 4, - 'n! - j n e 2;

2 2 j n d, - o!

a n e, e e j u W d.

o 2 2 n j!

- i n p!

r e 5 e o;

n / u w j.

, n e d), 2 2 d 6 l.

\ G, 20

u 6 / 6 o.

, 2 v H, e f d h B.

o 6 d v e - C n!

j e f u, j a d.

j H d t e r u

1. ghd, 2. D r r g d.  
g d, d o e k!

6:

— C r r f r n!

2/3 lo: (g / lo)

s! e r t e n.

o p p n! j e n - G e n!

z b e z e n,

' z n e n s.

w m:

o f t o<sup>2</sup> l e n s?

! ! g r n!

o - ' ~<sup>2</sup> z n n - /?

' - v!

4:

g°m!

wmt:

√210! 0 2, v sm!

df lo: (y 4)

~! ~! ~! ~! ~! ~! ~! ~! ~! ~!

wmt:

e v, sm! ~! ~!

~! ~! ~! ~! ~! ~!

~! ~! ~! ~! ~! ~!

~! ~! ~! ~! ~!

df lo:

6: √4!

gr: (J m)

im!

df lo: (j l)

2/v!

gr 2 l.

gr: (J m, 2.2c)

2/v! 2/v!

