Hoofdstuk 1

1.1 a b

 222 1 23

 873 1578

 112 9553

1718 7218

 157 212

3461 + 4139 +

6321 22700

1.2a b c

-1-1 -1-1 -1-1-1

9134 4585 7033

4319 - 3287 - 1398 -

4815 1298 5635

1.3 a b c d e

 34 67 61 55 78

 89 x 46 x 93 x 11 x 38 x

 306 402 183 55 624

 2720 + 2680 + 5490 + 550 + 2340 +

 3026 3082 5673 605 2964

1.4 a b c d e

 354 67 461 655 178

 83 x 546 x 79 x 102 x 398 x

 1062 402 4149 1310 1424

 28320 + 2680 32270 + 0000 16020

 29382 33500 + 36419 65500 + 53400

 36582 66810 70844

1.5a b c d e

13/154\11 $\frac{11}{13}$ 27/435\16 $\frac{3}{27}$ 23/631\27 $\frac{10}{23}$ 17/467\27 $\frac{8}{17}$ 37/780\21 $\frac{3}{37}$

 13 27 46 34 74

 24 165 171 127 40

 13 162 161 119 37

 11 3 10 8 3

1.6a b c d e

53/2334\44 $\frac{2}{53}$ 101/6463\63$\frac{100}{101}$ 59/7682\130 $\frac{12}{59}$ 451/6178\13$\frac{315}{451}$ 67/5811\86 $\frac{49}{67}$

 212 606 59 451 536

 214 403 178 1668 451

 212 303 177 1353 402

 2 100 12 315 49

 0

 12

1.7a b c d

11/15457\1405 $\frac{2}{11}$ 97/4534\46$\frac{72}{97}$ 23/63321\ 2753 $\frac{2}{23}$ 179/56467\315 $\frac{82}{179}$

 11 388 46 537

 44 654 173 276

 44 582 161 179

 05 72 122 977

 0 115 895

 57 71 82

 55 69

 2 2

e

307/78620\256 $\frac{28}{307}$

 614

 1722

 1535

 1870

 1842

 28

1.8a b c d

41/42334\1032 $\frac{22}{41}$ 101/13467\133$\frac{34}{101}$ 99/35641\360 $\frac{1}{99}$ 215/16155\75$\frac{30}{215}$

 41 101 297 1505

 13 336 594 1105

 03 303 594 1075

 133 337 01 30

 123 303 0

 104 34 1

 82

 22

e

83/92183\1110 $\frac{53}{83}$

 83

 91

 83

 88

 83

 53

 0

 53

1.9

a b c d e a = 2x2x2x3 = 23x3

24 2 72 2 250 2 96 2 98 2 b = 2x2x2x3x3 = 23x32

12 2 36 2 125 5 48 2 49 7 c = 2x5x5x5 = 2x53

6 2 18 2 25 5 24 2 7 7 d = 2x2x2x2x2x3=25x3

3 3 9 3  5 5 12 2 1 e = 2x7x7 = 2x72

1 3 3  1 6 2

1 3 3

1

1.10

a b c d e a = 25x32

288 2 1024 2 315 3 396 2 1875 3 b = 210

144 2  512 2 105 3 198 2 625 5 c = 32x5x7

72 2 256 2 35 5 99 3 125 5 d = 22x32x11

36 2 128 2 7 7 33 3 25 5 e = 3x54

18 2 64 2 1 11 11 5 5

9 3 32 2 1 1

3 3 16 2

1 8 2

4 2

 2 2

 1

1.11

a b c d ea= 22x35

972 2 676 2 2025 3 1122 2 860 2 b= 22x 132

486 2 338 2 675 3 561 3 430 2 c= 34x 52

243 3 169 13 225  3 187  11 215 5 d= 2x3x11x17

81 3 13 13 75 3 17 17 43 43 e= 22x5x43

27 3 125 5 1 1

9 3 5 5

3 3 1

1

1.12

a b c d e a= 3x5x17

255 3 441 3 722 2 432 2 985 5 b= 32x72

85 5 147 3 361 19 216 2 197 197 c= 2x192

17 17 49 7 19 19 108 2 1 d= 24x33

1 7 7 1 54 2 e= 5x197

1 27 3

9 3

3 3

1

1.13

a b c d e a= 24x53

2000 2 2001 3 2002 2 2003 2004 2 b= 3x23x29

1000 2 667 23 1001 7 1002 2 c= 2x7x11x13

500 2 29 29 143 11 501 3 d= 2003 (priem)

250 2 1 13 13 167 167 e= 22x3x167

125 5 1 1

25 5

5 5

1

1.15 zie antwoorden in wiskunde boek

1.16

1.17

A ggd(12,30) = (2x2x3 , 2x3x5) = (22x3 , 2x3x5) = 2x3 = 6

B ggd(24,84) = (2x2x2x3 , 2x2x3x7) = (23x3 , 22x3x7) = 22x3 = 12

C ggd(27,45) = (3x3x3 , 3x3x5) = (33 , 32x5) = 32 = 9

D ggd(32,56) = (2x2x2x2x2 , 2x2x2x7) = (25 , 23x7) = 23 = 8

E ggd(34,85) = (2x17 , 5x17) = 17

1.18

A ggd(45,225) = (3x3x5 , 3x3x5x5) = (32x5 , 32x52) = 32x5 = 45

B ggd(144,216) = (2x2x2x2x3x3 , 2x2x2x3x3x3) = (24x32 , 23x33) = 23x32 = 72

C ggd(90,196) = (2x3x3x5 , 2x2x7x7) = (2x32x5 , 22x72) = 2

D ggd(243,135) = (3x3x3x3x3 , 3x3x3x5) = (35 , 33x5) = 33 = 27

E ggd (288,168) = (2x2x2x2x2x3x3 , 2x2x2x3x7) = (25x32 , 23x3x7) = 23x3 = 24

1.19

A ggd(1024,864) = (2x2x2x2x2x2x2x2x2x2 , 2x2x2x2x2x3x3x3) = (210 , 25x33) = 25 = 32

B ggd (1122,1815) = (2x3x11x17 , 3x5x11x11) = (2x3x11x17 , 3x5x112) = 3x11 = 33

C ggd(875,1125) = (5x5x5x7 , 3x3x5x5x5) = (53x7 , 32x53) = 53 = 125

D ggd(1960,6370) = (2x2x2x5x7x7 , 2x5x7x7x13) = (23x5x72 , 2x5x72x13) = 2x5x72 = 490

E ggd(1024,1152) = (2x2x2x2x2x2x2x2x2x2 , 2x2x2x2x2x2x2x3x3) = (210 , 27x32) = 27 = 128

1.20

A ggd(1243,1244) = (11x113 , 2x2x311) = (11x113 , 22x311) = geen overeenkomsten dus = 1

B ggd(1721,1726) = (1721 , 2x863) = geen overeenkomsten dus = 1

C ggd(875,900) = (5x5x5x7 , 2x2x3x3x5x5) = (53x7 , 22x32x52) = 52 = 25

D ggd(1960,5880) = (2x2x2x5x7x7 , 2x2x2x3x5x7x7) = (23x5x72 , 23x3x5x72) = 23x5x72 = 1960

E ggd(1024,2024) = (2x2x2x2x2x2x2x2x2x2 , 2x2x2x11x23) = (210 , 23x11x13) = 23 = 8

1.21

A kgv(12,30) = (2x2x3 , 2x3x5) = (22x3 , 2x3x5) = 22x3x5 = 60

B kgv(27,45) = (3x3x3 , 3x3x5) = (33 , 32x5) = 33x5 = 135

C kgv(18,63) = (2x3x3 , 3x3x7) = (2x32 , 32x7) = 2x32x7 = 126

D kgv(16,40) = (2x2x2x2 , 2x2x2x5) = (24 , 23x5) = 24x5 = 80

E kgv(33,121) = (3x11 , 11x11) = (3x11 , 112) = 3x112 = 363

1.22

A kgv(52,39) = (2x2x13 , 3x13) = (22x13 , 3x13) = 22x3x13 = 156

B kgv(64,80) = (2x2x2x2x2x2 , 2x2x2x2x5) = (26 , 24x5) = 26x5 = 320

C kgv(144,240) = (2x2x2x2x3x3 , 2x2x2x2x3x5) = (24x32 , 24x3x5) = 24x32x5 = 720

D kgv(169,130) = (13x13 , 2x5x13) = (132 , 2x5x13) = 2x5x132 = 1690

E kgv(68,51) = (2x2x17 , 3x17) = (22x17 , 3x17) = 22x3x17 = 204

1.23

A kgv(250,125) = (2x5x5x5 , 5x5x5) = (2x53 , 53) = 2x53 = 250

B kgv(144,216) = (2x2x2x2x3x3 , 2x2x2x3x3x3) = (24x32 , 23x33) = 24x33 =432

C kgv(520,390) = (2x2x2x5x13 , 2x3x5x13) = (23x5x13 , 2x3x5x13) = 23x3x5x13 = 1560

D kgv(888,185) = (2x2x2x3x37 , 5x37) = (23x3x37 , 5x37) = 23x3x5x37 = 4440

E kgv(124,341) = (2x2x31 , 11x31) = (22x31 , 11x31) = 22x11x31 = 1364

1.24

A kgv(240,180) = (2x2x2x2x3x5 , 2x2x3x3x5) = (24x3x5 , 22x32x5) = 24x32x5 = 720

B kgv(276,414) = (2x2x3x23 , 2x3x3x23) = (22x3x23 , 2x32x23) = 22x32x23 = 828

C kgv(588,504) = (2x2x3x7x7 , 2x2x2x3x3x7) = (22x3x72 , 23x32x7) = 23x32x72 = 3528

D kgv(315,189) = (3x3x5x7 , 3x3x3x7) = (32x5x7 , 33x7) = 33x5x7 = 945

E kgv(403,221) = (13x31 , 13x17) = 13x17x31 = 6851

1.25

A

9 = 3x3 =32 ggd = 3 = 6

12 = 2x2x3 =22x3 kgv = 32x22x5 = 180

30 = 2x3x5 =2x3x5

B

24 =2x2x2x3 =23x3 ggd = 2x3 = 6

30 =2x3x5 =2x3x5 kgv 23x32x5 = 360

36 =2x2x3x3 =22x32

C

10 =2x5 ggd = 5

15 =3x5 kgv = 2x3x5x7 = 210

35 =5x7

D

18 =2x3x3 =2x32 ggd = 32 = 9

27 =3x3x3 =33 kgv = 2x33x7 = 378

63 =3x3x7 =32x7

E

21 =3x7 =3x7 ggd = 3

24 =2x2x2x3 =23x3 kgv = 23x33x7 = 1512

27 =3x3x3 =33

1.26

A

28 =2x2x7 =22x7 ggd = 7

35 =5x7 =5x7 kgv = 22x5x72 = 980

49 =7x7 =72

B

64 = 2x2x2x2x2x2 =26 ggd = 24 = 16

80 = 2x2x2x2x5 =24x5 kgv = 26x5x7 = 2240

112 = 2x2x2x2x7 =24x7

C

39 =3x13 =3x13 ggd = 13

52 =2x2x13 =22x13 kgv = 22x3x5x13 = 780

130 =2x5x13 =2x5x13

D

144 =2x2x2x2x3x3 =24x32 ggd = 22x3 = 12

168 =2x2x2x3x7 =23x3x7 kgv = 24x32x7 = 1008

252 =2x2x3x3x7 =22x32x7

E

189 =3x3x3x7 =33x7 ggd = 32x7 = 63

252 =2x2x3x3x7 =22x32x7 kgv = 22x33x5x7 = 3780

315 =3x3x5x7 =32x5x7