

# **Wiskunde voor vrijescholen Antwoorden Klas 7**

B.Geels

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# 1 Rekenen

1-1 a.  $6\frac{2}{3}$

b.  $7\frac{1}{2}$

1-2 a.  $4\frac{1}{6}$

b.  $4\frac{3}{5}$

1-3 a.  $33\frac{1}{3}$

b. 20

1-4 a. 1.200.000

b. 539

1-5 a. 11340

b. 2376

1-6 a. 23,3

b. 150

1-7 a.  $\frac{1}{36}$

b.  $\frac{1}{18}$

1-8 a.  $\frac{1}{9}$

b.  $\frac{1}{3}$

1-9 a.  $\frac{1}{8}$

b.  $\frac{4}{9}$

1-10 a.  $\frac{1}{3}$

b.  $\frac{2}{5}$

1-11 a.  $\frac{2}{5}$

b.  $\frac{1}{3}$

1-12 a.  $\frac{1}{2}$

b.  $\frac{1}{8}$

c.  $\frac{4}{11}$

1-13 a.  $\frac{3}{5}$

b.  $\frac{3}{8}$

1-14 a.  $\frac{2}{5}$

b.  $\frac{2}{9}$

c. 5

d.  $8\frac{1}{2}$

c.  $4\frac{1}{2}$

d.  $10\frac{5}{12}$

c.  $12\frac{1}{2}$

d. 25

c. 0,0846

d. 70

c. 15

d. 18

c. 0,0024

d. 81

c.  $\frac{1}{2}$

d.  $\frac{1}{10}$

c.  $\frac{2}{9}$

d.  $\frac{1}{4}$

c.  $\frac{1}{5}$

d.  $\frac{2}{5}$

c.  $\frac{3}{4}$

d.  $\frac{5}{6}$

c.  $\frac{1}{2}$

d.  $\frac{1}{2}$

d.  $\frac{1}{2}$

e.  $\frac{1}{5}$

f.  $\frac{9}{31}$

c.  $\frac{2}{3}$

d.  $\frac{1}{3}$

c.  $\frac{3}{7}$

d.  $\frac{2}{5}$

e.  $8\frac{4}{7}$

f.  $7\frac{7}{9}$

e.  $11\frac{1}{6}$

f.  $3\frac{7}{9}$

e.  $16\frac{2}{3}$

f.  $11\frac{1}{9}$

e. 0,00846

f. 14

e. 2997

f. 0,72

e. 169

f. 125

e.  $\frac{2}{15}$

f.  $\frac{3}{10}$

e.  $\frac{8}{45}$

f.  $\frac{16}{45}$

e.  $\frac{1}{12}$

f.  $\frac{5}{12}$

e.  $\frac{2}{3}$

f.  $\frac{1}{2}$

e.  $\frac{4}{11}$

f.  $\frac{1}{3}$

g.  $\frac{2}{3}$

h.  $\frac{4}{7}$

i.  $\frac{5}{3}$

e.  $\frac{7}{12}$

f.  $\frac{1}{5}$

e. 1

f.  $\frac{1}{43}$

g.  $8\frac{3}{4}$

h.  $7\frac{1}{2}$

g.  $1\frac{6}{7}$

h.  $5\frac{5}{11}$

g.  $14\frac{2}{7}$

h.  $8\frac{1}{3}$

e. 0,00846

f. 14

e. 2997

f. 0,72

e. 169

f. 125

e.  $\frac{2}{15}$

f.  $\frac{3}{10}$

e.  $\frac{8}{45}$

f.  $\frac{16}{45}$

e.  $\frac{1}{12}$

f.  $\frac{5}{12}$

e.  $\frac{2}{3}$

f.  $\frac{1}{2}$

e.  $\frac{4}{11}$

f.  $\frac{1}{3}$

g.  $\frac{2}{3}$

h.  $\frac{4}{7}$

i.  $\frac{5}{3}$

g.  $\frac{3}{8}$

h.  $\frac{1}{8}$

g.  $\frac{3}{8}$

h.  $\frac{1}{15}$

<b>1-15</b>	a. $\frac{12}{20}$	c. $\frac{8}{12}$	e. $\frac{12}{16}$	g. $\frac{20}{50}$
	b. $\frac{6}{15}$	d. $\frac{6}{18}$	f. $\frac{6}{8}$	h. $\frac{6}{42}$
<b>1-16</b>	a. $\frac{25}{40}$	c. $\frac{8}{28}$	e. $\frac{25}{30}$	g. $\frac{15}{27}$
	b. $\frac{36}{42}$	d. $\frac{8}{10}$	f. $\frac{12}{28}$	h. $\frac{16}{72}$
<b>1-17</b>	a. $\frac{3}{4}$	c. $\frac{2}{3}$	e. $\frac{7}{12}$	g. $\frac{3}{8}$
	b. $\frac{1}{4}$	d. $\frac{1}{3}$	f. $\frac{1}{12}$	h. $\frac{1}{8}$
<b>1-18</b>	a. $\frac{7}{10}$	c. $\frac{1}{2}$	e. $\frac{5}{6}$	g. $\frac{7}{8}$
	b. $\frac{3}{10}$	d. $\frac{1}{4}$	f. $\frac{1}{2}$	h. $\frac{2}{7}$
<b>1-19</b>	a. $1\frac{2}{5}$	c. $1\frac{5}{6}$	e. 1	g. $4\frac{2}{3}$
	b. 5	d. $1\frac{2}{11}$	f. $4\frac{7}{11}$	h. 8
<b>1-20</b>	a. $10\frac{1}{6}$	d. $11\frac{3}{4}$	g. $5\frac{9}{10}$	
	b. $6\frac{2}{3}$	e. $16\frac{1}{4}$	h. $3\frac{3}{4}$	
	c. $8\frac{5}{12}$	f. $8\frac{1}{3}$	i. $10\frac{1}{6}$	
<b>1-21</b>	31, 26, 34, 30, 200			
<b>1-22</b>	a. $3\frac{1}{3}$	c. $1\frac{2}{3}$	e. $5\frac{2}{3}$	g. $3\frac{1}{7}$
	b. $1\frac{8}{11}$	d. $\frac{2}{3}$	f. $\frac{2}{3}$	h. $5\frac{1}{2}$
<b>1-23</b>	a. $\frac{3}{4}$	c. $1\frac{3}{4}$	e. $\frac{5}{8}$	g. $\frac{3}{8}$
	b. $\frac{19}{24}$	d. $1\frac{7}{24}$	f. $2\frac{1}{2}$	h. $1\frac{5}{6}$
<b>1-24</b>	a. $\frac{9}{14}$	c. $\frac{19}{33}$	e. $2\frac{13}{40}$	g. $4\frac{1}{21}$
	b. $1\frac{29}{35}$	d. $\frac{19}{42}$	f. $6\frac{7}{9}$	h. $7\frac{5}{18}$
<b>1-25</b>	a. $1\frac{5}{18}$	c. $\frac{23}{45}$	e. $\frac{19}{28}$	g. $\frac{133}{180}$
	b. $\frac{7}{30}$	d. $\frac{7}{16}$	f. $\frac{13}{48}$	h. $2\frac{13}{80}$
<b>1-26</b>	a. $1\frac{1}{30}$	c. $1\frac{2}{15}$	e. $1\frac{1}{15}$	g. $\frac{17}{20}$
	b. $1\frac{1}{12}$	d. $1\frac{11}{12}$	f. $\frac{1}{16}$	h. $\frac{5}{16}$
<b>1-27</b>	a. $10\frac{5}{12}$	c. $21\frac{1}{2}$	e. $20\frac{5}{6}$	g. $1\frac{1}{12}$
	b. $1\frac{1}{6}$	d. $11\frac{1}{4}$	f. $5\frac{3}{10}$	h. $30\frac{1}{3}$
<b>1-28</b>	a. $\frac{1}{6}$	c. $\frac{1}{8}$	e. $\frac{1}{4}$	g. $\frac{3}{32}$
	b. $2\frac{2}{3}$	d. $6\frac{3}{4}$	f. $21\frac{3}{5}$	h. $46\frac{2}{7}$
<b>1-29</b>	a. $1\frac{13}{14}$	c. $2\frac{10}{21}$	e. $\frac{1}{3}$	g. $1\frac{4}{5}$
	b. $18\frac{3}{4}$	d. $25\frac{5}{7}$	f. $29\frac{1}{3}$	h. $57\frac{1}{6}$

<b>1-30</b>	<b>a.</b> $\frac{2}{15}$	<b>c.</b> $\frac{8}{27}$	<b>e.</b> $\frac{2}{7}$	<b>g.</b> $\frac{1}{4}$
	<b>b.</b> $\frac{1}{5}$	<b>d.</b> $\frac{1}{4}$	<b>f.</b> $\frac{1}{3}$	<b>h.</b> $4\frac{1}{3}$
<b>1-31</b>	<b>a.</b> $2\frac{1}{4}$	<b>c.</b> $1\frac{7}{9}$	<b>e.</b> $3\frac{2}{3}$	<b>g.</b> 4
	<b>b.</b> $3\frac{1}{2}$	<b>d.</b> 5	<b>f.</b> $2\frac{19}{36}$	<b>h.</b> $3\frac{1}{2}$
<b>1-32</b>	<b>a.</b> $1\frac{7}{8}$	<b>c.</b> $2\frac{1}{3}$	<b>e.</b> $1\frac{1}{4}$	<b>g.</b> $1\frac{1}{3}$
	<b>b.</b> $1\frac{1}{24}$	<b>d.</b> $\frac{4}{27}$	<b>f.</b> 12	<b>h.</b> $2\frac{3}{4}$
<b>1-33</b>	<b>a.</b> $\frac{1}{6}$	<b>c.</b> $\frac{1}{6}$	<b>e.</b> $\frac{4}{13}$	
	<b>b.</b> $\frac{7}{26}$	<b>d.</b> $\frac{3}{11}$	<b>f.</b> $\frac{7}{33}$	
<b>1-34</b>	<b>a.</b> $\frac{1}{8}$	<b>c.</b> $\frac{1}{12}$	<b>e.</b> $\frac{1}{12}$	<b>g.</b> $\frac{1}{32}$
	<b>b.</b> $\frac{2}{3}$	<b>d.</b> $\frac{3}{4}$	<b>f.</b> $\frac{3}{5}$	<b>h.</b> $\frac{4}{7}$
<b>1-35</b>	<b>a.</b> $\frac{3}{7}$	<b>c.</b> $\frac{1}{3}$	<b>e.</b> 3	<b>g.</b> 9
	<b>b.</b> $\frac{3}{4}$	<b>d.</b> $\frac{5}{7}$	<b>f.</b> $1\frac{5}{6}$	<b>h.</b> $1\frac{1}{6}$
<b>1-36</b>	<b>a.</b> $6\frac{3}{4}$	<b>c.</b> $10\frac{5}{6}$	<b>e.</b> $16\frac{2}{3}$	<b>g.</b> $14\frac{1}{6}$
	<b>b.</b> $1\frac{1}{4}$	<b>d.</b> $2\frac{1}{2}$	<b>f.</b> $5\frac{5}{6}$	<b>h.</b> $3\frac{5}{6}$
<b>1-37</b>	<b>a.</b> 1	<b>c.</b> 1	<b>e.</b> $\frac{1}{2}$	<b>g.</b> 2
	<b>b.</b> 1	<b>d.</b> 2	<b>f.</b> $2\frac{1}{2}$	<b>h.</b> $\frac{16}{25}$
<b>1-38</b>	<b>a.</b> $2\frac{1}{4}$	<b>c.</b> 2	<b>e.</b> 6	<b>g.</b> 3
	<b>b.</b> 4	<b>d.</b> 2	<b>f.</b> $\frac{1}{4}$	<b>h.</b> $\frac{4}{15}$
<b>1-39</b>	<b>a.</b> $\frac{1}{2}$	<b>c.</b> $\frac{1}{10}$	<b>e.</b> $1\frac{2}{3}$	<b>g.</b> 9
	<b>b.</b> $1\frac{1}{5}$	<b>d.</b> $1\frac{1}{6}$	<b>f.</b> $\frac{3}{5}$	<b>h.</b> $1\frac{1}{3}$
<b>1-40</b>	<b>a.</b> $15\frac{3}{5}$	<b>c.</b> 42	<b>e.</b> $39\frac{6}{7}$	<b>g.</b> 82
	<b>b.</b> 8	<b>d.</b> 10	<b>f.</b> 35	<b>h.</b> 40
<b>1-41</b>	<b>a.</b> 15	<b>c.</b> 28	<b>e.</b> 49	<b>g.</b> 35
	<b>b.</b> 51	<b>d.</b> 88	<b>f.</b> 65	<b>h.</b> 20
<b>1-42</b>	<b>a.</b> 15	<b>c.</b> 32	<b>e.</b> 25	<b>g.</b> 32
	<b>b.</b> 35	<b>d.</b> 55	<b>f.</b> 44	<b>h.</b> 14
<b>1-43</b>	<b>a.</b> 10	<b>c.</b> 15	<b>e.</b> 30	<b>g.</b> 88
	<b>b.</b> 14	<b>d.</b> 20	<b>f.</b> 14	<b>h.</b> 9
<b>1-44</b>	<b>a.</b> $\frac{3}{4}$	<b>c.</b> $\frac{17}{40}$	<b>e.</b> $\frac{17}{20}$	<b>g.</b> $\frac{3}{200}$
	<b>b.</b> $\frac{7}{8}$	<b>d.</b> $\frac{1}{8}$	<b>f.</b> $\frac{5}{8}$	<b>h.</b> $\frac{3}{8}$

<b>1-45</b>	<b>a.</b> 0,25	<b>c.</b> 0,75	<b>e.</b> 0,05
	<b>b.</b> 0,16	<b>d.</b> 1,4	<b>f.</b> 0,9
<b>1-46</b>	<b>a.</b> $\frac{1}{4}$	<b>c.</b> $\frac{4}{5}$	<b>e.</b> $3\frac{2}{5}$
	<b>b.</b> $3\frac{3}{4}$	<b>d.</b> $4\frac{1}{4}$	<b>f.</b> $5\frac{1}{5}$
<b>1-47</b>	<b>a.</b> 0,125	<b>c.</b> 0,8	<b>e.</b> 0,375
	<b>b.</b> 0,025	<b>d.</b> 0,02	<b>f.</b> 0,04
<b>1-48</b>	<b>a.</b> 6,375	<b>c.</b> 7,5	<b>e.</b> 12,75
	<b>b.</b> 7,625	<b>d.</b> 6,6	<b>f.</b> 3,4
<b>1-49</b>	<b>a.</b> $\frac{3}{5}$	<b>c.</b> $\frac{4}{5}$	<b>e.</b> $\frac{3}{25}$
	<b>b.</b> $3\frac{1}{4}$	<b>d.</b> $4\frac{3}{8}$	<b>f.</b> $19\frac{1}{8}$
<b>1-50</b>	<b>a.</b> 1,6	<b>c.</b> 5,5	<b>e.</b> 6,2
	<b>b.</b> 7,6	<b>d.</b> 0,15	<b>f.</b> 2,01
<b>1-51</b>	<b>a.</b> 5,943	<b>c.</b> 2,014	<b>e.</b> 4,198
	<b>b.</b> 0,89	<b>d.</b> 3,201	<b>f.</b> 0,9
<b>1-52</b>	<b>a.</b> 271,2	<b>c.</b> 6,25	<b>e.</b> 0,169
	<b>b.</b> 16,9	<b>d.</b> 0,17	<b>f.</b> 63,36
<b>1-53</b>	<b>a.</b> 0,004	<b>c.</b> 11	<b>e.</b> 8,946
	<b>b.</b> 57	<b>d.</b> 123,3	<b>f.</b> 0,0004
<b>1-54</b>	<b>a.</b> 0,06	<b>c.</b> 0,006	<b>e.</b> 0,6
	<b>b.</b> 4,5	<b>d.</b> 1,45	<b>f.</b> 0,381
<b>1-55</b>	<b>a.</b> 60	<b>e.</b> 800	
	<b>b.</b> 0,012	<b>f.</b> 16.500.000	
	<b>c.</b> 350	<b>g.</b> 35.640	
	<b>d.</b> 1.912,5	<b>h.</b> 17.800	

- 1-56**
- a. 0,05
  - b. 0,12
  - c. 3,5
  - d. 3,9125

- 1-57**
- a. 13.440
  - b. 50
  - c. 0,3345
  - d. 398

- 1-58**
- a.  $7\frac{7}{10}$
  - b.  $5\frac{1}{3}$

- 1-59**
- a.  $15\frac{13}{15}$
  - b.  $1\frac{1}{5}$

- 1-60**
- a.  $4\frac{1}{8}$
  - b.  $3\frac{1}{3}$

- 1-61**
- a.  $19\frac{4}{15}$
  - b.  $\frac{1}{10}$

- 1-62**
- a.  $15\frac{1}{3}$
  - b.  $14\frac{37}{60}$

- 1-63**
- a.  $\frac{4}{7}$
  - b.  $3\frac{1}{2}$

- 1-64**
- a.  $5\frac{1}{4}$
  - b.  $\frac{1}{15}$

- 1-65**
- a.  $11\frac{13}{24}$
  - b.  $3\frac{43}{60}$

- 1-66**
- a.  $11\frac{1}{4}$
  - b. 10

- 1-67**
- a.  $\frac{4}{17}$
  - b.  $1\frac{1}{3}$

- 1-68**
- a.  $\frac{19}{20}$
  - b.  $\frac{5}{8}$

- c.  $7\frac{1}{21}$
- d.  $8\frac{1}{2}$

- c. 1
- d. 2

- c.  $5\frac{1}{3}$
- d.  $2\frac{5}{16}$

- c.  $2\frac{22}{49}$
- d.  $7\frac{1}{2}$

- c.  $9\frac{1}{2}$
- d.  $4\frac{2}{3}$

- c.  $\frac{2}{3}$
- d.  $5\frac{1}{2}$

- c.  $5\frac{3}{25}$
- d.  $\frac{4}{7}$

- c.  $44\frac{5}{12}$
- d.  $12\frac{9}{14}$

- c. 66
- d.  $9\frac{1}{6}$

- c.  $3\frac{3}{4}$
- d.  $\frac{2}{13}$

- c.  $1\frac{3}{5}$
- d.  $\frac{47}{200}$

- e. 8.000
- f. 16.500.000
- g. 35.640
- h. 1,88

- e. 0,670.7
- f. 2850
- g. 0,003.007
- h. 3,009

- e.  $10\frac{1}{2}$
- f.  $9\frac{7}{12}$

- e.  $7\frac{1}{2}$
- f.  $4\frac{1}{2}$

- e.  $1\frac{1}{8}$
- f.  $10\frac{1}{4}$

- e.  $5\frac{7}{8}$
- f.  $1\frac{35}{88}$

- e.  $25\frac{23}{24}$
- f. 12

- e.  $22\frac{73}{126}$
- f.  $1\frac{35}{37}$

- e.  $14\frac{1}{2}$
- f.  $\frac{7}{36}$

- e.  $19\frac{7}{36}$
- f.  $5\frac{121}{150}$

- e.  $1\frac{3}{7}$
- f.  $63\frac{1}{4}$

- e.  $1\frac{1}{2}$
- f.  $\frac{5}{6}$

- e.  $\frac{9}{80}$
- f.  $1\frac{6}{25}$

<b>1-69</b>	a. 0,375	c. 0,5555...	e. 0,1875
	b. 1,25	d. 0,475	f. 0,175
<b>1-70</b>	a. $4\frac{1}{3}$		c. 23
	b. $5\frac{13}{50}$		d. $4\frac{13}{18}$
<b>1-71</b>	a. 25%	c. 20%	e. 50%
	b. 5%	d. 75%	f. 28%
<b>1-72</b>	a. 62,5%	c. $33\frac{1}{3}\%$	e. $16\frac{2}{3}\%$
	b. $66\frac{2}{3}\%$	d. 70%	f. 35%
<b>1-73</b>	a. 40%	c. 75%	e. 60%
	b. 10%	d. 30%	f. 15%
<b>1-74</b>	a. 4%	c. 12%	e. $33\frac{1}{3}\%$
	b. 60%	d. 80%	f. 36%
<b>1-75</b>	a. $\frac{1}{100}$	c. $\frac{3}{100}$	e. $\frac{7}{100}$
	b. $\frac{9}{100}$	d. $\frac{13}{100}$	f. $\frac{17}{100}$
<b>1-76</b>	a. $\frac{23}{100}$	c. $\frac{49}{100}$	e. $\frac{21}{100}$
	b. $\frac{63}{100}$	d. $\frac{51}{100}$	f. $\frac{31}{100}$
<b>1-77</b>	a. $\frac{3}{25}$	c. $\frac{1}{25}$	e. $\frac{1}{2}$
	b. $\frac{3}{4}$	d. $\frac{1}{10}$	f. $\frac{7}{10}$
<b>1-79</b>	a. $\frac{1}{5}$	c. $\frac{1}{3}$	e. $\frac{2}{3}$
	b. $\frac{1}{8}$	d. $\frac{3}{8}$	f. $\frac{5}{8}$
<b>1-80</b>	a. 4,5	c. 13,5	e. 12,5
	b. 17,5	d. 13,2	f. 52,8
<b>1-81</b>	a. 12,75	c. 25,5	e. 63,75
	b. 127,5	d. 255	f. 637,5
<b>1-82</b>	$\frac{1}{5}$ 120; $\frac{1}{10}$ 175; $\frac{1}{4}$ 200; $\frac{1}{2}$ 450;		
<b>1-83</b>	200, 20, 300, 900		
<b>1-84</b>	a. 15	c. 52,5	e. 174
	b. 360	d. 19,2	f. 18
<b>1-85</b>	a. 81,2	c. 259,2	e. 42,5
	b. 287,5	d. 570	f. 149,5



- |       |                              |          |          |
|-------|------------------------------|----------|----------|
| 1-86  | a. 4                         | d. 9     | g. 46    |
|       | b. 6,5                       | e. 7,8   | h. 18,3  |
|       | c. 7,25                      | f. 12,25 | i. 19,87 |
| 1-87  | a. 9                         | c. 51    | e. 52    |
|       | b. 127,5                     | d. 22    | f. 28    |
| 1-88  | a. 69                        | c. 162   | e. 44    |
|       | b. 65                        | d. 192   | f. 112   |
| 1-89  | €600                         |          |          |
| 1-90  | €530                         |          |          |
| 1-91  | €12                          |          |          |
| 1-92  | a. €30                       | d. €32   | g. €63   |
|       | b. €2                        | e. €21   | h. €12   |
|       | c. €32                       | f. €84   | i. €90   |
| 1-93  | $9 + 15 + 30 + 32 = 86$      |          |          |
| 1-94  | $12 + 56 + 76 + 300 = 444$   |          |          |
| 1-95  | $63 + 217 + 253 + 140 = 673$ |          |          |
| 1-96  | $117 + 153 + 91 + 140 = 501$ |          |          |
| 1-97  | €25                          | €45      |          |
|       | €140                         | €175     |          |
|       | €180                         | €275     |          |
|       | €150                         | €140     |          |
| 1-98  | €15                          | €40      |          |
|       | €12                          | €36      |          |
|       | €48                          | €96      |          |
|       | €60                          | €26      |          |
| 1-99  | €70                          |          |          |
| 1-100 | €61,25                       | €32,25   |          |
|       | €71,40                       | €72      |          |
|       | €930                         | €700     |          |
|       | €69,60                       | €150     |          |
| 1-101 | €96                          | €504     |          |
|       | €230                         | €121     |          |
|       | €58                          | €582     |          |
|       | €99                          | €15,63   |          |

1-102

€60	€60	€8
€540	€480	€48

1-103

€38,40	€4,44	€60
€678,40	€35,56	€420

1-104

€270	€84
€282	€112
€684	€54
€114,54	€60

1-105

€90, €35, €238, €155,

1-106

€10	$\frac{1}{10}$	10%
€20	$\frac{1}{5}$	20%
€75	$\frac{1}{8}$	$12\frac{1}{2}\%$
€240	$\frac{1}{3}$	$33\frac{1}{3}\%$
€10	$\frac{1}{8}$	$12\frac{1}{2}\%$

1-107

C

1-108

B

1-109

D

1-110

C

1-111

C

1-112

E

1-113

a. 405.449 < 541.994	d. 13, 112 > 12, 789	g. XX > XIX
b. 7, 009 < 7, 114	e. CL > XL	h. 285.678 > 258.805
c. 910, 10 < 1.001, 99	f. 94, 12 > 93, 248	i. MDCXC > MDXC

1-114

a. 42.000 → 84.000 → 168.000 → 336.000  
 b. 2.222, 022 → 4.444, 044 → 8.888, 088 → 17.776, 176  
 c. 1.125, 5 → 2.251, 0 → 4.502, 0 → 9.004, 0  
 d. 500.000 → 1.000.000 → 2.000.000 → 4.000.000  
 e. 75.500 → 151.000 → 302.000 → 604.000  
 f. 60.331, 075 → 120.662, 150 → 241.324, 300 → 482.648, 600

1-115

a. 0, 001	c. 2, 12	e. 0, 3
b. 5, 35	d. 10, 0018	f. 75, 125

1-116

a. 551.958	c. 5.351.201	e. 803.481
b. 1.006.998	d. 1.037.905	f. 1.804.687

1-117	a. 99.047	c. 167.045	e. 199.283
	b. 103.938	d. 2.369	f. 17.591
1-118	a. 623.417	c. 773.243	e. 478.664
	b. 2.131.095	d. 2.490.508	f. 466.154
1-119	a. 726.282	c. 408.333	e. 216.676.623
	b. 13.103	d. 53.199	f. 321,06
1-120	a. 328.956	c. 1.071.675	e. 1.637.024
	b. 1.485	d. 5.100.132	f. 28.403.087
1-121	a. 194.688	c. 142.884	e. 120.780
	b. 347.295	d. 921.816	f. 407.672
1-122	a. 93.795	c. 138.306	e. 261.516
	b. 392.940	d. 95.513	f. 161.994
1-123	a. 37.125	c. 25,615	e. 142,252
	b. 1.909.800	d. 22,25	f. 32,376
1-124	a. 553.635	c. 1.314.896	e. 6.922.293
	b. 832.644	d. 3.312.710,5	f. 1.003.681,8
1-125	a. 28	c. 15	e. 19
	b. 21	d. 36	f. 16
1-126	a. 47	c. 43	e. 62
	b. 63	d. 96	f. 56
1-127	a. 8	c. 11	e. 6
	b. 2	d. 18	f. 4
1-128	a. 48	c. 65	
	b. 242	d. 349	
1-129	a. $\frac{1}{2}$	c. $\frac{2}{9}$	e. $\frac{1}{3}$
	b. $\frac{3}{7}$	d. $\frac{4}{5}$	f. $\frac{1}{7}$
1-130	a. $1\frac{3}{4}$	c. $1\frac{4}{3}$	e. $2\frac{1}{2}$
	b. $4\frac{1}{3}$	d. $3\frac{3}{10}$	f. $2\frac{3}{4}$

<b>1-131</b>	a. $\frac{3}{7}$	c. 2	e. 8
	b. $\frac{2}{3}$	d. 15	f. 9
<b>1-132</b>	a. $\frac{1}{45}$	c. $\frac{9}{28}$	e. $\frac{7}{18}$
	b. $\frac{1}{3}$	d. $\frac{3}{10}$	f. $\frac{21}{80}$
<b>1-133</b>	a. $\frac{5}{16}$	c. $\frac{4}{5}$	e. $\frac{3}{14}$
	b. $\frac{13}{40}$	d. $\frac{3}{17}$	f. $1\frac{6}{7}$
<b>1-134</b>	a. $\frac{1}{15}$	c. $\frac{47}{48}$	e. $\frac{4}{23}$
	b. $\frac{3}{4}$	d. $\frac{1}{8}$	f. $\frac{49}{54}$
<b>1-135</b>	a. $1\frac{1}{2}$	c. $10\frac{5}{8}$	e. $2\frac{5}{16}$
	b. $1\frac{17}{91}$	d. $3\frac{27}{80}$	f. $\frac{1}{6}$
<b>1-136</b>	a. $4\frac{1}{2}$	c. $1\frac{11}{16}$	e. $1\frac{1}{2}$
	b. $2\frac{1}{50}$	d. $1\frac{3}{7}$	f. $34\frac{2}{7}$
<b>1-137</b>	$\frac{3}{8} < \frac{5}{12} < \frac{1}{2} < \frac{2}{3} < \frac{3}{4} < \frac{5}{6} < \frac{13}{24}$		
<b>1-138</b>	$\frac{7}{40} < \frac{3}{10} < \frac{7}{20} < \frac{3}{8} < \frac{1}{2} < \frac{3}{4} < \frac{4}{5}$		
<b>1-139</b>	a. $\frac{3}{5}$	c. $\frac{7}{9}$	e. $\frac{1}{2}$
	b. $\frac{4}{13}$	d. $\frac{5}{18}$	f. $\frac{20}{37}$
<b>1-140</b>	a. $\frac{5}{8}$	c. $\frac{10}{21}$	e. $\frac{37}{56}$
	b. $\frac{7}{9}$	d. $\frac{17}{30}$	f. $\frac{1}{4}$
<b>1-141</b>	a. $9\frac{5}{7}$	c. $5\frac{7}{8}$	e. 10
	b. $6\frac{11}{30}$	d. $6\frac{7}{20}$	f. $15\frac{7}{15}$
<b>1-142</b>	a. $7\frac{7}{8}$	c. $8\frac{1}{12}$	e. $5\frac{1}{10}$
	b. 8	d. $12\frac{1}{2}$	f. $25\frac{5}{12}$

- |              |   |                          |                            |
|--------------|---|--------------------------|----------------------------|
| <b>1-143</b> | <b>a.</b> $2\frac{4}{7}$  | <b>c.</b> $2\frac{2}{3}$ | <b>e.</b> $4\frac{1}{12}$  |
|              | <b>b.</b> $5\frac{16}{35}$  | <b>d.</b> $4\frac{3}{8}$ | <b>f.</b> $3\frac{4}{7}$   |
| <b>1-144</b> | <b>a.</b> $3\frac{2}{5}$  | <b>c.</b> $3\frac{3}{9}$ | <b>e.</b> $1\frac{11}{12}$ |
|              | <b>b.</b> $5\frac{11}{24}$  | <b>d.</b> $2\frac{3}{4}$ | <b>f.</b> $\frac{5}{12}$   |
| <b>1-145</b> | <b>a.</b> 50%   | <b>c.</b> 20%            | <b>e.</b> 45%              |
|              | <b>b.</b> 72%   | <b>d.</b> 12,5%          | <b>f.</b> 5,8%             |
| <b>1-146</b> | <b>a.</b> 75%   | <b>c.</b> 50%            | <b>e.</b> 12,5%            |
|              | <b>b.</b> 20%   | <b>d.</b> 60%            | <b>f.</b> 36%              |
| <b>1-147</b> | <b>a.</b> 2   | <b>d.</b> 0,6            | <b>g.</b> 45               |
|              | <b>b.</b> 16  | <b>e.</b> 3              | <b>h.</b> 14               |
|              | <b>c.</b> 30  | <b>f.</b> 4,2            | <b>i.</b> 200              |
| <b>1-148</b> | <b>a.</b> 1,8   | <b>d.</b> 2.200          | <b>g.</b> 80               |
|              | <b>b.</b> 3   | <b>e.</b> 2.700          | <b>h.</b> 30               |
|              | <b>c.</b> 32  | <b>f.</b> 4.500          | <b>i.</b> 2,4              |
| <b>1-149</b> | <b>a.</b> 60  | <b>c.</b> 35,2           | <b>e.</b> 533              |
|              | <b>b.</b> 3.840   | <b>d.</b> 3              | <b>f.</b> 11,25            |
| <b>1-150</b> | <b>a.</b> 240   | <b>c.</b> 245            | <b>e.</b> 200              |
|              | <b>b.</b> 5.600   | <b>d.</b> 3.360          | <b>f.</b> 2.970            |
| <b>1-151</b> | <b>a.</b> 20%   | <b>c.</b> 25%            | <b>e.</b> 12,5%            |
|              | <b>b.</b> 25%   | <b>d.</b> 40%            | <b>f.</b> 60%              |
| <b>1-152</b> | 1.500.000   | 6000.511.000             | 382.708.060                |
|              |   |                          | 407.021.398                |
| <b>1-153</b> | <b>a.</b> zevenhonderdvijfentwintig miljoen                                       |                          |                            |
|              | <b>b.</b> drieënzestig miljoen zevenhonderdvijftigduizend                         |                          |                            |
|              | <b>c.</b> drie miljoen vierhonderdzesenvijftigduizend zevenhonderdneuentachtig    |                          |                            |
|              | <b>d.</b> tweehonderdachtentachtig miljoen  |                          |                            |
|              | <b>e.</b> veertien miljoen achthonderdneuenenvijftigduizend                       |                          |                            |
|              | <b>f.</b> zevenhonderdvijfenveertig miljoen honderdelfduizend driehonderdnegentig |                          |                            |
|              | <b>g.</b> vijfnegentig miljoen vijfhonderdduizend                                 |                          |                            |
|              | <b>h.</b> negen miljoen zeshonderdeenendertigduizend vierhonderdvijfzeventig      |                          |                            |
|              | <b>i.</b> achtentwintig miljoen driehonderdeenenzestigduizend                     |                          |                            |

1-154

- |  |   |
|--|---|
| a. $81.057.349 < 81.750.999$                   | e. $705.378.050 > 700.900.600$                        |
| b. $0,3 \text{ miljard} > 38.000.000$          | f. $3,7 \text{ miljoen} > 400.000$                    |
| c. $970 \text{ miljoen} > 0,7 \text{ miljard}$ | g. $0,8 \text{ miljard} > 85 \text{ miljoen}$         |
| d. $\frac{1}{4} \text{ miljoen} < 400.000$     | h. $\frac{1}{2} \text{ miljard} > 75 \text{ miljoen}$ |

1-155

- |                |                  |                  |
|----------------|------------------|------------------|
| a. 11.916.950  | c. 42.982.338    | e. 119.696.999   |
| b. 991.643.735 | d. 1.364.559.827 | f. 1.330.446.614 |

1-156

- |                |                 |                  |
|----------------|-----------------|------------------|
| a. 1.682.170   | c. 15.472.241   | e. 49.073.425    |
| b. 276.140.729 | d. 3.827.758,34 | f. 37.203.040,84 |

1-157

- |                     |                  |                   |
|---------------------|------------------|-------------------|
| a. 9.123.034,13     | c. 72.424.004,14 | e. 968.394.817,33 |
| b. 1.543.358.763,17 | d. 46.799.357,79 | f. 134.514.470,01 |

1-158

- |                   |                   |                  |
|-------------------|-------------------|------------------|
| a. 3.777.166,85   | c. 13.871.765,10  | e. 17.953.711,70 |
| b. 262.493.589,26 | d. 194.010.418,11 | f. 6.886.197,90  |

1-159

- |                    |                   |                    |                   |
|--------------------|-------------------|--------------------|-------------------|
| a. $\frac{4}{5}$   | c. $\frac{3}{20}$ | e. $\frac{12}{25}$ | g. $\frac{7}{50}$ |
| b. $\frac{19}{20}$ | d. $\frac{6}{25}$ | f. $\frac{3}{5}$   | h. $\frac{7}{8}$  |

1-160

- |                     |                     |                     |
|---------------------|---------------------|---------------------|
| a. $3\frac{22}{55}$ | c. $5\frac{25}{36}$ | e. $4\frac{17}{30}$ |
| b. $7\frac{14}{15}$ | d. $9\frac{71}{72}$ | f. $2\frac{13}{15}$ |

1-161

- |                     |                      |                     |
|---------------------|----------------------|---------------------|
| a. $3\frac{6}{35}$  | c. $8\frac{1}{9}$    | e. $7\frac{9}{20}$  |
| b. $10\frac{5}{24}$ | d. $10\frac{13}{84}$ | f. $13\frac{7}{30}$ |

1-162

- |                     |                     |                     |
|---------------------|---------------------|---------------------|
| a. $6\frac{16}{45}$ | c. $8\frac{3}{8}$   | e. $5\frac{5}{11}$  |
| b. $4\frac{7}{12}$  | d. $7\frac{17}{28}$ | f. $3\frac{11}{15}$ |

1-163

- |                     |                     |                     |
|---------------------|---------------------|---------------------|
| a. $1\frac{24}{35}$ | c. $8\frac{27}{40}$ | e. $3\frac{13}{18}$ |
| b. $2\frac{37}{45}$ | d. $1\frac{7}{20}$  | f. $3\frac{2}{3}$   |

- 1-164** a. vijf miljoen zeventhonderdachtendertigduizend vierhonderdzesentwintig  
b. zevenenveertig miljoen negenhonderdzevenduizend elf  
c. acht miljoen vijfendertigduizend negenhonderdeenenzestig  
d. tweehonderdzes miljoen driehonderdeenenzestigduizend zeshonderdveertig  
e. twaalf miljoen negenhonderdzesenveertigduizend honderdnegenenvijftig  
f. negenhonderdzesien miljoen zeventhonderdneenenveertigduizend vijfhonderd

- 1-165** a. negen miljard vierhonderdachtennegentig miljoen zeshonderdeenendertigduizend  
b. achtentwintig miljard driehonderdvijfenveertig miljoen twaalfduizend achthonderd-negentig  
c. vijf miljard zeventhonderdvijftig miljoen driehonderdvijfennegentigduizend  
d. honderddrieënveertig miljard negenhonderdzevenenvijftig miljoen achthonderdveer-tigduizend  
e. tien miljard achthonderdzeven miljoen honderddrieënveertigduizend tweehonderd-vijftig  
f. zeventhonderdeenentachtig miljard zeshonderdttwaalf miljoen vijfennegentigduizend

<b>1-166</b>	a. 4,6	c. 25,5	e. 119,7
	b. 8,0	d. 18,0	f. 518,0
<b>1-167</b>	a. 3,71	c. 94,87	e. 529,54
	b. 7,00	d. 42,94	f. 804,50
<b>1-168</b>	a. 12	c. 5	e. 6
	b. 36	d. 25	f. 42
<b>1-169</b>	a. 2	c. 4	e. $7\frac{1}{2}$
	b. 58	d. 16	f. $37\frac{1}{2}$
<b>1-170</b>	a. 15	c. 20	e. 10
	b. 45	d. 40	f. 50
<b>1-171</b>	a. 3	c. $2\frac{1}{2}$	e. 4
	b. 27	d. $27\frac{1}{2}$	f. 28
<b>1-172</b>	a. 0,05	d. 0,25	g. $\frac{1}{12}$
	b. 0,15	e. 0,3	h. $\frac{1}{3}$
	c. 0,2	f. 0,7	i. $\frac{5}{6}$

- |              |                                       |                      |                      |
|--------------|---------------------------------------|----------------------|----------------------|
| <b>1-173</b> | a. 0,1                                | d. $\frac{1}{15}$    | g. $\frac{7}{60}$    |
|              | b. 0,6                                | e. $\frac{7}{15}$    | h. $\frac{12}{14}$   |
|              | c. 0,8                                | f. $\frac{2}{3}$     | i. $\frac{15}{15}$   |
| <b>1-174</b> | a. 100 km/u                           | c. 80 km/u           | e. 40 km/u           |
|              | b. 60 km/u                            | d. 160 km/u          | f. 50 km/u           |
| <b>1-175</b> | a. 180 km/u                           | c. 300 km/u          | e. 240 km/u          |
|              | b. 64 km/u                            | d. 72 km/u           | f. 105 km/u          |
| <b>1-176</b> | a. $1\frac{1}{12}$                    | c. $\frac{37}{63}$   | e. $\frac{87}{110}$  |
|              | b. $\frac{210}{121}$                  | d. $\frac{90}{73}$   | f. $\frac{120}{59}$  |
| <b>1-177</b> | a. $1\frac{29}{60}$                   | c. $\frac{67}{42}$   | e. $\frac{521}{360}$ |
|              | b. $\frac{253}{280}$                  | d. $\frac{133}{180}$ | f. $\frac{41}{60}$   |
| <b>1-178</b> | a. $\frac{5}{8}$                      | c. $\frac{3}{8}$     | e. $\frac{2}{9}$     |
|              | b. $\frac{3}{4}$                      | d. $\frac{6}{7}$     | f. $\frac{3}{5}$     |
| <b>1-179</b> | a. $\frac{4}{9}$                      | c. $\frac{4}{5}$     | e. $\frac{7}{8}$     |
|              | b. $\frac{2}{3}$                      | d. $\frac{4}{5}$     | f. $\frac{2}{5}$     |
| <b>1-180</b> | a. $\frac{3}{7}$                      | c. $\frac{4}{7}$     | e. $\frac{9}{10}$    |
|              | b. 2                                  | d. $\frac{2}{5}$     | f. $\frac{14}{15}$   |
| <b>1-181</b> | a. $\frac{8}{35}$                     | c. $\frac{7}{24}$    | e. $\frac{8}{63}$    |
|              | b. $\frac{3}{7}$                      | d. $\frac{6}{77}$    | f. $\frac{3}{80}$    |
| <b>1-182</b> | a. $\frac{1}{42}$                     | c. $\frac{1}{4}$     | e. $\frac{4}{9}$     |
|              | b. $\frac{5}{12}$                     | d. $\frac{1}{5}$     | f. $\frac{1}{3}$     |
| <b>1-183</b> | B : W = 3 : 2                         |                      |                      |
| <b>1-184</b> | B : W = 4 : 1                         |                      |                      |
| <b>1-185</b> | F : K : A = 6 : 8 : 11 = 12 : 16 : 22 |                      |                      |
| <b>1-186</b> | A : K = 8 : 9                         |                      |                      |



- 1-187**  $V : A_3 : 4$
- 1-188** **a.**  $j : m = 3 : 2$ ; **b.**  $j : m = 5 : 4$ ; **c.**  $j : m = 5 : 4$ ;  
**d.**  $j : m = 4 : 5$ ; **e.**  $j : m = 13 : 9$ ; **f.**  $j : m = 3 : 2$
- 1-189** **a.**  $G_M : G_J = 3 : 2$ ; **b.**  $G_J : G_M = 2 : 3$ ; **c.**  $l_J : l_M = 9 : 10$
- 1-190** Deze zijn gelijkvormig.
- 1-191** Deze zijn gelijkvormig.
- 1-192**  $4\text{cm} : 6\text{cm} \text{ --- } 2\text{dm} : 3\text{dm} \text{ --- } 160\text{km} : 240\text{km}$
- 1-193**  $5\text{cm} : 12\text{cm} : 13\text{cm} \text{ --- } 0,01\text{cm} : 0,024\text{cm} : 0,026\text{cm}$
- |                                |                   |                     |
|--------------------------------|-------------------|---------------------|
| <b>1-194</b> <b>a.</b> $2 : 1$ | <b>c.</b> $3 : 5$ | <b>e.</b> $4 : 1$   |
| <b>b.</b> $9 : 1$              | <b>d.</b> $7 : 9$ | <b>f.</b> $13 : 12$ |
- 1-195** **a.**  $w : b = 2 : 3$  **b.**  $w : b = 1 : 2$  **c.**  $w : m : b = 5 : 1 : 2$
- 1-196** **a.**  $\frac{1}{3}$ ; **b.**  $\frac{2}{5}$ ; **c.**  $\frac{5}{8}$ ; **d.**  $\frac{4}{7}$ ; **e.**  $\frac{8}{5} = 1\frac{3}{5}$
- 1-197** **a.** 900ml melk; **b.** 250ml water
- 1-198** **a.**  $B : W = 5 : 4$ ; **b.**  $B : W = 2 : 3$ ; **c.**  $B : W = 13 : 22$
- 1-199** Ja, gelijkvormig. want  $6 : 10 : 15 = 15 : 25 : 37,5$ ; alle maten  $\times 2\frac{1}{2}$   
 of:  $\frac{6}{15} = \frac{10}{15} = \frac{15}{37,5} = \frac{2}{3}$
- 1-200** **a.**  $j : m = 2 : 3$ ; **b.**  $\frac{10}{25} = \frac{2}{5}$ ; **c.**  $\frac{15}{25} = \frac{3}{5}$  of  $1 - \frac{2}{5} = \frac{3}{5}$
- 1-201** **a.** 32 j; **b.** 84 m; **c.** 44 j
- 1-202** **a.** 6 cm; **b.** 36 m; **c.**  $12\frac{1}{4}$  m;
- 1-203** Jan: €12,00; Kees: €16,00
- 1-204** Annabel: 27; Bea: 36; Caroline: 54
- 1-205** **a.**  $\frac{1}{10}$ ; **b.**  $D_1 : D_2 : D_3 = 5 : 4 : 1$
- 1-206** **a.** 21 ; **b.** 70 ; **c.** 315 koeien, 189 geiten
- 1-207** 1500 ml
- |                          |               |                  |
|--------------------------|---------------|------------------|
| <b>1-208</b> <b>a.</b> 4 | <b>c.</b> 12  | <b>e.</b> 6      |
| <b>b.</b> 990            | <b>d.</b> 440 | <b>f.</b> 63.000 |
- |                              |                |               |
|------------------------------|----------------|---------------|
| <b>1-209</b> <b>a.</b> 1,198 | <b>c.</b> 0,09 | <b>e.</b> 256 |
| <b>b.</b> 2,014              | <b>d.</b> 8    | <b>f.</b> 34  |
- |                                   |                          |
|-----------------------------------|--------------------------|
| <b>1-210</b> <b>a.</b> $16x + 5y$ | <b>d.</b> $-6xy$         |
| <b>b.</b> $39x + 28y$             | <b>e.</b> $-5q^2$        |
| <b>c.</b> $4a - 3a^2 + 6ab$       | <b>f.</b> $-11x^4 - x^3$ |

- |              |   |                   |                    |
|--------------|---|-------------------|--------------------|
| <b>1-211</b> | a. 18%  | c. 55%            | e. 32%             |
|              | b. 82%  | d. 87%            | f. 62.5%           |
| <b>1-212</b> | a. 61%  | c. 4,69%          | e. 0,3%            |
|              | b. 25%  | d. 245%           | f. 80%             |
| <b>1-213</b> | a. 25%  | c. 50%            | e. 48%             |
|              | b. 30%  | d. 20%            | f. 12%             |
| <b>1-214</b> | a. $\frac{3}{5}$  | c. $\frac{1}{50}$ | e. $\frac{2}{25}$  |
|              | b. $\frac{2}{3}$  | d. $\frac{3}{10}$ | f. $\frac{5}{6}$   |
|              |   |                   | g. $\frac{7}{25}$  |
|              |   |                   | h. $\frac{1}{200}$ |
| <b>1-215</b> | a. 54   | c. 36             |                    |
|              | b. 81   | d. 9              |                    |
| <b>1-216</b> | a. 3  | c. 61,7           | e. 22              |
|              | b. 900  | d. 210            | f. 28              |
| <b>1-217</b> | a. 16   | c. 48             |                    |
|              | b. 130  | d. 900            |                    |
| <b>1-218</b> | €267,50   |                   |                    |
| <b>1-219</b> | €240,00   |                   |                    |
| <b>1-220</b> | a. $\approx 4000$ ; b. $\approx 4,5$ ; c. $\approx 70\%$ ; d. $\approx 5\%$ ; e. $\approx 95\%$ |                   |                    |
| <b>1-221</b> | a. 961  | c. 10404          | e. 440             |
|              | b. 8  | d. 42.000         | f. 4800            |
| <b>1-222</b> | a. 60   | b. $11a - 4b$     | c. $-39abc$        |
| <b>1-223</b> | a. 15%  | c. 8,7%           | e. 84%             |
|              | b. 60%  | d. 80%            | f. 13,4%           |
| <b>1-224</b> | a. $\frac{7}{20}$   | c. $\frac{1}{5}$  | e. $\frac{7}{25}$  |
|              | b. $\frac{3}{4}$  | d. $\frac{7}{10}$ | f. $\frac{11}{20}$ |
| <b>1-225</b> | a. 6  | c. 612            | e. 200             |
|              | b. 165  | d. 10,6           | f. 300             |
| <b>1-226</b> | a. 80%; b. 65%; c. 30%; d. 37,5%  |                   |                    |
| <b>1-227</b> | a. 75; b. 32.000; c. 135  |                   |                    |

1-228	75%
1-229	"Het Liegbeest"
1-230	€330,-
1-231	€2.130,-
1-232	€7.530,-
1-233	36.000
1-234	1.555 km
1-235	10 uur en 20 min
1-236	14
1-237	geel
1-238	900
1-239	28
1-240	72
1-241	€48,16
1-242	dinsdag 13 februari

1-243	7
1-244	$3\frac{1}{2}$ uur
1-245	6uur
1-246	Plasso
1-247	€880,-
1-248	€640,-
1-249	60
1-250	9:10 uur
1-251	€299,-
1-252	euro0,53
1-253	$937,5 \text{ m}^3 = 937500 \text{ ltr}$
1-254	€62,50
1-255	49 min
1-256	11
1-257	400%

## 2 Getallen

2-1

- |        |        |        |
|--------|--------|--------|
| a. ja  | d. nee | g. ja  |
| b. ja  | e. ja  | h. nee |
| c. nee | f. ja  | i. ja  |

2-2  $840 = 2 \times 3 \times 4 \times 5 \times 7$ . Het is dus deelbaar door:

- |                            |   |
|----------------------------|---|
| $2 \times 3 = 6$           | $2 \times 4 \times 5 = 40$                    |
| $2 \times 4 = 8$           | $2 \times 4 \times 7 = 56$                    |
| $2 \times 5 = 10$          | $2 \times 5 \times 7 = 70$                    |
| $2 \times 7 = 14$          | $3 \times 4 \times 5 = 60$                    |
| $3 \times 4 = 12$          | $3 \times 4 \times 7 = 84$                    |
| $3 \times 5 = 15$          | $4 \times 5 \times 7 = 140$                   |
| $3 \times 7 = 21$          | $2 \times 3 \times 4 \times 5 = 120$          |
| $4 \times 5 = 20$          | $2 \times 3 \times 4 \times 7 = 168$          |
| $4 \times 7 = 28$          | $2 \times 3 \times 5 \times 7 = 210$          |
| $5 \times 7 = 35$          | $2 \times 4 \times 5 \times 7 = 280$          |
| $2 \times 3 \times 4 = 24$ | $3 \times 4 \times 5 \times 7 = 420$          |
| $2 \times 3 \times 5 = 30$ | $2 \times 3 \times 4 \times 5 \times 7 = 840$ |
| $2 \times 3 \times 7 = 42$ |   |

2-3	2	3	4	5	6	7	8	9	10	11	12
224	+	-	+	-	-	+	+	-	-	-	-
504	+	+	+	-	+	+	+	+	-	-	+
1024	+	-	+	-	-	-	+	-	-	-	-
1320	+	+	+	+	+	-	+	-	+	+	+
2205	-	+	-	+	-	+	-	+	-	-	-
5555	-	-	-	+	-	-	-	-	-	+	-
7272	+	+	+	-	+	-	+	+	-	+	+
55557	-	+	-	-	-	-	-	+	-	-	-
102411	-	+	-	-	-	-	-	+	-	-	-

- |      |                   |                   |        |        |
|------|-------------------|-------------------|--------|--------|
| 2-4  | a. 26             | c. 10             | e. 80  |        |
|      | b. 30             | d. 2              | f. 2   |        |
| 2-5  | a. 28             | c. 83             | e. 600 |        |
|      | b. 55             | d. 28             | f. 48  |        |
| 2-6  | a. 9              | c. 7              | e. 30  |        |
|      | b. 92             | d. 6              | f. 33  |        |
| 2-7  | a. 42             | c. 27             | e. 36  |        |
|      | b. $2\frac{2}{5}$ | d. $\frac{1}{15}$ | f. 50  |        |
| 2-8  | a. 10             | c. 12             | e. 14  |        |
|      | b. 11             | d. 13             | f. 15  |        |
| 2-9  | a. -13            | c. 8              | e. 21  | g. -34 |
|      | b. 3              | d. -20            | f. 2   | h. -2  |
| 2-10 | a. 2              | c. -3             | e. -7  | g. -1  |
|      | b. 2              | d. -10            | f. 4   | h. -3  |
| 2-11 | a. -4             | c. -27            | e. -4  | g. -25 |
|      | b. -8             | d. -8             | f. 44  | h. -12 |
| 2-12 | a. 0              | c. 2              | e. 10  | g. 34  |
|      | b. -28            | d. -30            | f. 17  | h. 8   |
| 2-13 | a. -1             | c. -25            | e. 25  | g. -25 |
|      | b. 1              | d. 1              | f. -1  | h. -25 |
| 2-14 | a. 2              | c. -4             | e. -26 | g. 0   |
|      | b. 26             | d. -16            | f. -46 | h. 40  |

<b>2-15</b>	<b>a.</b> 0	<b>c.</b> -19	<b>e.</b> 6	<b>g.</b> 8
	<b>b.</b> 29	<b>d.</b> 47	<b>f.</b> -8	<b>h.</b> 3
<b>2-16</b>	<b>a.</b> 8	<b>c.</b> -15	<b>e.</b> 20	<b>g.</b> 32
	<b>b.</b> -20	<b>d.</b> 32	<b>f.</b> 16	<b>h.</b> -42
<b>2-17</b>	<b>a.</b> -1	<b>c.</b> 19	<b>e.</b> -15	<b>g.</b> -14
	<b>b.</b> -11	<b>d.</b> -5	<b>f.</b> 0	<b>h.</b> 44
<b>2-18</b>	<b>a.</b> -1	<b>c.</b> 30	<b>e.</b> -52	<b>g.</b> 35
	<b>b.</b> 0	<b>d.</b> -10	<b>f.</b> -2	<b>h.</b> -64
<b>2-19</b>	<b>a.</b> 18	<b>c.</b> -16	<b>e.</b> -12	<b>g.</b> -21
	<b>b.</b> 35	<b>d.</b> 6	<b>f.</b> -17	<b>h.</b> -42
<b>2-20</b>	<b>a.</b> 13	<b>c.</b> -6	<b>e.</b> -20	
	<b>b.</b> -9	<b>d.</b> 23	<b>f.</b> 5	
<b>2-21</b>	<b>a.</b> -108	<b>c.</b> -25	<b>e.</b> -39	
	<b>b.</b> 81	<b>d.</b> 98	<b>f.</b> -144	
<b>2-22</b>	<b>a.</b> -91	<b>c.</b> 50	<b>e.</b> -144	
	<b>b.</b> 70	<b>d.</b> -98	<b>f.</b> 180	
<b>2-23</b>	<b>a.</b> -270	<b>c.</b> 224	<b>e.</b> -80	
	<b>b.</b> 105	<b>d.</b> 64	<b>f.</b> 330	
<b>2-24</b>	<b>a.</b> 216	<b>c.</b> -120	<b>e.</b> -56	
	<b>b.</b> 162	<b>d.</b> -240	<b>f.</b> 0	
<b>2-25</b>	<b>a.</b> 5	<b>c.</b> -5	<b>e.</b> $-\frac{1}{5}$	<b>g.</b> 4
	<b>b.</b> -3	<b>d.</b> $-\frac{1}{4}$	<b>f.</b> $\frac{1}{5}$	<b>h.</b> 1
<b>2-26</b>	<b>a.</b> $\frac{1}{2}$	<b>c.</b> $-\frac{1}{3}$	<b>e.</b> $-\frac{2}{5}$	
	<b>b.</b> $-2\frac{1}{2}$	<b>d.</b> $\frac{1}{7}$	<b>f.</b> $\frac{1}{11}$	
<b>2-28</b>	<b>a.</b> nee	<b>d.</b> ja	<b>g.</b> ja	
	<b>b.</b> ja	<b>e.</b> nee	<b>h.</b> nee	
	<b>c.</b> ja	<b>f.</b> ja	<b>i.</b> nee	

2-29

- |                    |                    |                   |                   |
|--------------------|--------------------|-------------------|-------------------|
| a. $1\frac{2}{15}$ | c. $\frac{5}{6}$   | e. $2\frac{1}{2}$ | g. $1\frac{1}{6}$ |
| b. $\frac{5}{14}$  | d. $\frac{11}{12}$ | f. $\frac{1}{2}$  | h. $\frac{1}{10}$ |

2-30

- |                   |                     |                      |                     |
|-------------------|---------------------|----------------------|---------------------|
| a. $3\frac{1}{2}$ | c. $3\frac{7}{8}$   | e. $2\frac{83}{110}$ | g. $\frac{1}{2}$    |
| b. $4\frac{3}{4}$ | d. $6\frac{13}{15}$ | f. $10\frac{7}{16}$  | h. $1\frac{29}{68}$ |

2-31

- |           |         |              |
|-----------|---------|--------------|
| a. 40.000 | c. 3,24 | e. 14.400    |
| b. 0,36   | d. 0,01 | f. 0,000.009 |

2-32

- |         |              |         |
|---------|--------------|---------|
| a. 900  | c. 0,49      | e. 1,96 |
| b. 2,89 | d. 0,000.001 | f. 0,09 |

2-33

- |           |              |            |
|-----------|--------------|------------|
| a. 90.000 | c. 3,61      | e. 16.900  |
| b. 0,49   | d. 1.000.000 | f. 0,000.9 |

2-34

- |           |                  |          |
|-----------|------------------|----------|
| a. 27.000 | c. 0,064         | e. 1000  |
| b. 0,001  | d. 0,000.000.001 | f. 0,027 |

2-35

- |              |           |                  |
|--------------|-----------|------------------|
| a. 0,001.6   | c. 32     | e. 0,000.32      |
| b. 3.200.000 | d. 0,0001 | f. 1.000.000.000 |

2-36

- |                    |                     |                   |
|--------------------|---------------------|-------------------|
| a. $\frac{4}{49}$  | c. $1\frac{32}{49}$ | e. $\frac{9}{64}$ |
| b. $3\frac{1}{16}$ | d. $\frac{81}{121}$ | f. $\frac{4}{9}$  |

2-37

- |       |       |       |
|-------|-------|-------|
| a. 3  | d. 4  | g. 10 |
| b. 6  | e. 34 | h. 63 |
| c. 43 | f. 21 | i. 46 |

2-38

- |       |       |       |
|-------|-------|-------|
| a. 16 | d. 21 | g. 36 |
| b. 66 | e. 76 | h. 90 |
| c. 64 | f. 42 | i. 55 |

2-39

- |      |       |        |
|------|-------|--------|
| a. 6 | b. 28 | c. 496 |
|------|-------|--------|
- , dit zijn zogenaamde volmaakte getallen.

**2-40** 284 en 220, dit zijn zgn. bevriende getallen.

**2-41**

- |                          |                            |                            |                                   |
|--------------------------|----------------------------|----------------------------|-----------------------------------|
| <b>a.</b> $2^4 \times 3$ | <b>c.</b> $2^2 \times 3^2$ | <b>e.</b> $2^3 \times 5$   | <b>g.</b> $2^6$                   |
| <b>b.</b> $3 \times 5^2$ | <b>d.</b> $3^4$            | <b>f.</b> $2^4 \times 3^2$ | <b>h.</b> $2 \times 3^2 \times 5$ |

**2-42**

- |                            |                                 |                          |                                   |
|----------------------------|---------------------------------|--------------------------|-----------------------------------|
| <b>a.</b> $2^2 \times 5^2$ | <b>c.</b> $2 \times 5 \times 7$ | <b>e.</b> $3^2 \times 5$ | <b>g.</b> $2^3 \times 3^2$        |
| <b>b.</b> $2 \times 29$    | <b>d.</b> $2^5 \times 3$        | <b>f.</b> $3^3 \times 5$ | <b>h.</b> $2^3 \times 3 \times 5$ |

**2-43**

- |                          |                                  |                                       |                                 |
|--------------------------|----------------------------------|---------------------------------------|---------------------------------|
| <b>a.</b> $2 \times 7^2$ | <b>c.</b> $2 \times 3 \times 17$ | <b>e.</b> $2^4 \times 5$              | <b>g.</b> $2 \times 3 \times 5$ |
| <b>b.</b> $2^2 \times 3$ | <b>d.</b> $3^3$                  | <b>f.</b> $2^3 \times 3^4 \times 5^2$ | <b>h.</b> $7^3 \times 3^5$      |

**2-44**

- |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| <b>a.</b> $3^5$ | <b>c.</b> $2^7$ | <b>e.</b> $4^5$ | <b>g.</b> $5^6$ |
| <b>b.</b> $2^8$ | <b>d.</b> $3^6$ | <b>f.</b> $5^3$ | <b>h.</b> $6^6$ |

**2-45**

- |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| <b>a.</b> $2^8$ | <b>c.</b> $3^5$ | <b>e.</b> $8^3$ | <b>g.</b> $6^5$ |
| <b>b.</b> $5^5$ | <b>d.</b> $3^7$ | <b>f.</b> $5^5$ | <b>h.</b> $2^9$ |

**2-46**

- |                    |                 |                    |                    |
|--------------------|-----------------|--------------------|--------------------|
| <b>a.</b> $6^7$    | <b>c.</b> $3^7$ | <b>e.</b> $2^{10}$ | <b>g.</b> $3^{11}$ |
| <b>b.</b> $5^{10}$ | <b>d.</b> $4^4$ | <b>f.</b> $7^5$    | <b>h.</b> $2^{10}$ |

**2-47** 1 en  $84; \frac{19}{84}, \frac{7}{12}$

**2-48** 1 en  $15; \frac{8}{15}, \frac{3}{5}$

**2-49** 2 en  $60; \frac{11}{60}, \frac{5}{6}$

**2-50** 3 en  $45; \frac{8}{45}, 1\frac{2}{3}$

**2-51** 4 en  $60; \frac{8}{60}, \frac{3}{5}$

**2-52** 2 en  $56; \frac{11}{56}, \frac{4}{7}$

**2-53** 4 en  $48; \frac{7}{48}, \frac{3}{4}$

- 2-54**
- |               |               |               |                |
|---------------|---------------|---------------|----------------|
| <b>a.</b> 5   | <b>c.</b> 10  | <b>e.</b> 12  | <b>g.</b> 13   |
| <b>b.</b> 0,7 | <b>d.</b> 0,8 | <b>f.</b> 0,1 | <b>h.</b> 1000 |

- 2-55**
- |             |                |                |                 |
|-------------|----------------|----------------|-----------------|
| <b>a.</b> 4 | <b>c.</b> 30   | <b>e.</b> k.n. | <b>g.</b> 16    |
| <b>b.</b> 1 | <b>d.</b> k.n. | <b>f.</b> 8    | <b>h.</b> 0,001 |

**2-56** **a.**  $4 + 3 = 7$

**b.**  $5 - 2 = 3$

**c.**  $13 - 12 = 1$

**d.**  $10 - 11 = -1$

- |             |                    |                   |                   |                    |
|-------------|--------------------|-------------------|-------------------|--------------------|
| <b>2-57</b> | a. 2               | c. 9              | e. 10             | g. 10              |
|             | b. 1               | d. 4              | f. 19             | h. 5               |
| <b>2-58</b> | a. 6               |                   | c. 22             |                    |
|             | b. 4               |                   | d. 0              |                    |
| <b>2-59</b> | a. 5               | c. 7              | e. $4 + 2 = 6$    |                    |
|             | b. 5               | d. $10 + 10 = 20$ | f. 10             |                    |
| <b>2-60</b> | a. $\frac{2}{3}$   | c. $\frac{1}{6}$  | e. $\frac{1}{2}$  | g. $\frac{1}{3}$   |
|             | b. $4\frac{1}{2}$  | d. $1\frac{1}{4}$ | f. $\frac{8}{9}$  | h. $1\frac{2}{5}$  |
| <b>2-61</b> | a. 3               | c. 4              | e. 2              |                    |
|             | b. 7               | d. 10             | f. 10             |                    |
| <b>2-62</b> | a. $1\frac{1}{2}$  | c. $2\frac{1}{2}$ | e. $1\frac{1}{3}$ | g. $2\frac{1}{3}$  |
|             | b. $1\frac{1}{5}$  | d. $3\frac{1}{3}$ | f. $4\frac{1}{2}$ | h. $1\frac{3}{4}$  |
| <b>2-63</b> | a. $2\frac{1}{3}$  | c. $3\frac{1}{4}$ | e. $4\frac{1}{4}$ | g. $2\frac{3}{4}$  |
|             | b. $11\frac{1}{2}$ | d. $6\frac{1}{3}$ | f. $5\frac{1}{7}$ | h. $10\frac{1}{2}$ |
| <b>2-64</b> | a. $\frac{2}{5}$   |                   | c. $1\frac{1}{2}$ |                    |
|             | b. $\frac{1}{4}$   |                   | d. $\frac{1}{2}$  |                    |
| <b>2-65</b> | a. 144             | c. 1,44           | e. 441            | g. 4,41            |
|             | b. 0,01            | d. 0,49           | f. 0,04           | h. 6,25            |
| <b>2-66</b> | a. 11              | c. 1,1            | e. 1,3            | g. 0,6             |
|             | b. 0,9             | d. 0,7            | f. 0,3            | h. 0,1             |
| <b>2-67</b> | a. 0,1             |                   | c. 0,2            |                    |
|             | b. 0,2             |                   | d. 0,3            |                    |
| <b>2-68</b> | a. $2\frac{1}{2}$  | c. 30             | e. 42             | g. 2               |
|             | b. 12              | d. 5              | f. 14             | h. 35              |
| <b>2-69</b> | a. 30              | c. 1000           | e. 100            | g. 300000          |
|             | b. 20              | d. 0,0002         | f. 0,3            | h. 50000           |



**2-70**

- |              |               |              |              |
|--------------|---------------|--------------|--------------|
| <b>a.</b> 4  | <b>c.</b> 1   | <b>e.</b> 6  | <b>g.</b> 10 |
| <b>b.</b> 30 | <b>d.</b> 138 | <b>f.</b> 36 | <b>h.</b> 35 |

**2-71**

- |                           |                           |                          |                           |
|---------------------------|---------------------------|--------------------------|---------------------------|
| <b>a.</b> $\frac{9}{16}$  | <b>c.</b> $22\frac{1}{2}$ | <b>e.</b> $6\frac{2}{9}$ | <b>g.</b> $8\frac{4}{7}$  |
| <b>b.</b> $20\frac{1}{4}$ | <b>d.</b> $4\frac{2}{3}$  | <b>f.</b> 150            | <b>h.</b> $17\frac{1}{2}$ |

**2-72** 15 en 9

**2-73** 1,2 en 2,4

**2-74** 1125 en 625 kg

**2-75** 27 en 9 jaar

**2-76** 4250 m

**2-77** 75 cm

**2-78** b.v.  $1 \div 2000$

**2-79** €19,50

**2-80**  $43\frac{1}{3}$  kg

**2-81** 112,5 min

**2-82** €175

**2-83** 200 km

**2-84** 2 dagen

**2-85** 60 min

**2-86** 25 uur

**2-87**

- |                 |                |                 |
|-----------------|----------------|-----------------|
| <b>a.</b> 280   | <b>d.</b> 4800 | <b>g.</b> 15000 |
| <b>b.</b> 54000 | <b>e.</b> 8400 | <b>h.</b> 2250  |
| <b>c.</b> 20000 | <b>f.</b> 9600 | <b>i.</b> 6000  |

**2-88**

- |               |               |               |
|---------------|---------------|---------------|
| <b>a.</b> 300 | <b>d.</b> 4   | <b>g.</b> 800 |
| <b>b.</b> 50  | <b>e.</b> 700 | <b>h.</b> 20  |
| <b>c.</b> 30  | <b>f.</b> 4   | <b>i.</b> 60  |

**2-89**

- |               |               |               |
|---------------|---------------|---------------|
| <b>a.</b> 24  | <b>d.</b> 920 | <b>g.</b> 350 |
| <b>b.</b> 750 | <b>e.</b> 78  | <b>h.</b> 144 |
| <b>c.</b> 54  | <b>f.</b> 9,3 | <b>i.</b> 840 |

**2-90**

- |                |               |               |
|----------------|---------------|---------------|
| <b>a.</b> 600  | <b>d.</b> 300 | <b>g.</b> 300 |
| <b>b.</b> 4000 | <b>e.</b> 90  | <b>h.</b> 800 |
| <b>c.</b> 300  | <b>f.</b> 200 | <b>i.</b> 300 |

**2-91**

- |               |               |               |
|---------------|---------------|---------------|
| <b>a.</b> 140 | <b>d.</b> 92  | <b>g.</b> 56  |
| <b>b.</b> 340 | <b>e.</b> 164 | <b>h.</b> 104 |
| <b>c.</b> 220 | <b>f.</b> 288 | <b>i.</b> 244 |

**2-92**

- |               |               |               |
|---------------|---------------|---------------|
| <b>a.</b> 68  | <b>d.</b> 380 | <b>g.</b> 192 |
| <b>b.</b> 116 | <b>e.</b> 332 | <b>h.</b> 260 |
| <b>c.</b> 212 | <b>f.</b> 64  | <b>i.</b> 820 |

**2-93**

- |                |               |               |
|----------------|---------------|---------------|
| <b>a.</b> 2160 | <b>d.</b> 144 | <b>g.</b> 30  |
| <b>b.</b> 60   | <b>e.</b> 364 | <b>h.</b> 316 |
| <b>c.</b> 2280 | <b>f.</b> 176 | <b>i.</b> 100 |

**2-94**

- |              |              |              |
|--------------|--------------|--------------|
| <b>a.</b> 12 | <b>d.</b> 17 | <b>g.</b> 45 |
| <b>b.</b> 33 | <b>e.</b> 65 | <b>h.</b> 24 |
| <b>c.</b> 14 | <b>f.</b> 22 | <b>i.</b> 35 |

**2-95**

- |              |                |               |
|--------------|----------------|---------------|
| <b>a.</b> 55 | <b>d.</b> 16   | <b>g.</b> 18  |
| <b>b.</b> 95 | <b>e.</b> 85   | <b>h.</b> 105 |
| <b>c.</b> 13 | <b>f.</b> 1005 | <b>i.</b> 30  |

**2-96**

- |                           |                           |                |
|---------------------------|---------------------------|----------------|
| <b>a.</b> 11              | <b>d.</b> 9               | <b>g.</b> 28   |
| <b>b.</b> $23\frac{1}{2}$ | <b>e.</b> $13\frac{1}{2}$ | <b>h.</b> 44   |
| <b>c.</b> 3,6             | <b>f.</b> 58              | <b>i.</b> 2,45 |

**2-97**

- |               |               |               |
|---------------|---------------|---------------|
| <b>a.</b> 80  | <b>d.</b> 190 | <b>g.</b> 440 |
| <b>b.</b> 210 | <b>e.</b> 170 | <b>h.</b> 290 |
| <b>c.</b> 110 | <b>f.</b> 380 | <b>i.</b> 370 |

**2-98**

- |               |               |               |
|---------------|---------------|---------------|
| <b>a.</b> 310 | <b>d.</b> 140 | <b>g.</b> 330 |
| <b>b.</b> 470 | <b>e.</b> 270 | <b>h.</b> 410 |
| <b>c.</b> 480 | <b>f.</b> 390 | <b>i.</b> 220 |

**2-99**

- |               |                |                |
|---------------|----------------|----------------|
| <b>a.</b> 425 | <b>d.</b> 245  | <b>g.</b> 165  |
| <b>b.</b> 485 | <b>e.</b> 2750 | <b>h.</b> 6.1  |
| <b>c.</b> 395 | <b>f.</b> 2550 | <b>i.</b> 10,5 |

**2-100**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 5,4  | <b>d.</b> 10,6 | <b>g.</b> 14,4 |
| <b>b.</b> 13,4 | <b>e.</b> 23,6 | <b>h.</b> 19   |
| <b>c.</b> 8,2  | <b>f.</b> 9,8  | <b>i.</b> 24,4 |

**2-101**

- |               |                |                |
|---------------|----------------|----------------|
| <b>a.</b> 2,8 | <b>d.</b> 15,2 | <b>g.</b> 16,2 |
| <b>b.</b> 6,6 | <b>e.</b> 11,6 | <b>h.</b> 19,6 |
| <b>c.</b> 5,6 | <b>f.</b> 18,4 | <b>i.</b> 12,8 |

**2-102**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 4,6  | <b>d.</b> 3,7  | <b>g.</b> 16,6 |
| <b>b.</b> 6,66 | <b>e.</b> 3,8  | <b>h.</b> 0,84 |
| <b>c.</b> 87   | <b>f.</b> 18,4 | <b>i.</b> 1,22 |

**2-103**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 1225 | <b>d.</b> 7225 | <b>g.</b> 9025 |
| <b>b.</b> 625  | <b>e.</b> 3025 | <b>h.</b> 5625 |
| <b>c.</b> 2025 | <b>f.</b> 225  | <b>i.</b> 4225 |

**2-104**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 225  | <b>d.</b> 9025 | <b>g.</b> 7225 |
| <b>b.</b> 1225 | <b>e.</b> 625  | <b>h.</b> 3025 |
| <b>c.</b> 825  | <b>f.</b> 2025 | <b>i.</b> 4225 |

**2-105**

- |                  |                 |                  |
|------------------|-----------------|------------------|
| <b>a.</b> 11025  | <b>d.</b> 1225  | <b>g.</b> 562500 |
| <b>b.</b> 72,25  | <b>e.</b> 422,5 | <b>h.</b> 2250   |
| <b>c.</b> 132,25 | <b>f.</b> 3025  | <b>i.</b> 0,2025 |

**2-106**

- |               |                |               |
|---------------|----------------|---------------|
| <b>a.</b> 682 | <b>d.</b> 198  | <b>g.</b> 385 |
| <b>b.</b> 891 | <b>e.</b> 286  | <b>h.</b> 484 |
| <b>c.</b> 638 | <b>f.</b> 1012 | <b>i.</b> 187 |

**2-107**

- |                |               |               |
|----------------|---------------|---------------|
| <b>a.</b> 759  | <b>d.</b> 341 | <b>g.</b> 814 |
| <b>b.</b> 1056 | <b>e.</b> 429 | <b>h.</b> 517 |
| <b>c.</b> 1089 | <b>f.</b> 913 | <b>i.</b> 968 |

**2-108**

- |               |                |                 |
|---------------|----------------|-----------------|
| <b>a.</b> 297 | <b>d.</b> 71,5 | <b>g.</b> 4,18  |
| <b>b.</b> 616 | <b>e.</b> 143  | <b>h.</b> 36300 |
| <b>c.</b> 858 | <b>f.</b> 2,42 | <b>i.</b> 10340 |

**2-109**

- |               |                |                |
|---------------|----------------|----------------|
| <b>a.</b> 300 | <b>d.</b> 1100 | <b>g.</b> 1300 |
| <b>b.</b> 400 | <b>e.</b> 1150 | <b>h.</b> 2200 |
| <b>c.</b> 600 | <b>f.</b> 1400 | <b>i.</b> 2300 |

**2-110**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 1700 | <b>d.</b> 1200 | <b>g.</b> 2000 |
| <b>b.</b> 1450 | <b>e.</b> 300  | <b>h.</b> 800  |
| <b>c.</b> 2100 | <b>f.</b> 1800 | <b>i.</b> 2400 |

**2-111**

- |               |                |                |
|---------------|----------------|----------------|
| <b>a.</b> 850 | <b>d.</b> 1950 | <b>g.</b> 1450 |
| <b>b.</b> 350 | <b>e.</b> 185  | <b>h.</b> 700  |
| <b>c.</b> 215 | <b>f.</b> 150  | <b>i.</b> 210  |

**2-112**

- |               |                |               |
|---------------|----------------|---------------|
| <b>a.</b> 3,2 | <b>d.</b> 12   | <b>g.</b> 7,2 |
| <b>b.</b> 96  | <b>e.</b> 12,8 | <b>h.</b> 26  |
| <b>c.</b> 48  | <b>f.</b> 34   | <b>i.</b> 3,8 |

**2-113**

- |                |               |                |
|----------------|---------------|----------------|
| <b>a.</b> 16   | <b>d.</b> 360 | <b>g.</b> 60   |
| <b>b.</b> 20   | <b>e.</b> 88  | <b>h.</b> 30   |
| <b>c.</b> 10,8 | <b>f.</b> 6   | <b>i.</b> 10,4 |

**2-114**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 140  | <b>d.</b> 4,44 | <b>g.</b> 0,92 |
| <b>b.</b> 20   | <b>e.</b> 6,8  | <b>h.</b> 16,8 |
| <b>c.</b> 8,88 | <b>f.</b> 3288 | <b>i.</b> 5,2  |

**2-115**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 5940 | <b>d.</b> 7425 | <b>g.</b> 891  |
| <b>b.</b> 8712 | <b>e.</b> 3465 | <b>h.</b> 6039 |
| <b>c.</b> 6534 | <b>f.</b> 4752 | <b>i.</b> 7920 |

**2-116**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 2178 | <b>d.</b> 396  | <b>g.</b> 5346 |
| <b>b.</b> 8217 | <b>e.</b> 3861 | <b>h.</b> 9603 |
| <b>c.</b> 1089 | <b>f.</b> 1386 | <b>i.</b> 2079 |

**2-117**

- |                 |                 |                  |
|-----------------|-----------------|------------------|
| <b>a.</b> 5148  | <b>d.</b> 900,9 | <b>g.</b> 76,23  |
| <b>b.</b> 257,4 | <b>e.</b> 1980  | <b>h.</b> 326700 |
| <b>c.</b> 712,8 | <b>f.</b> 435,6 | <b>i.</b> 5,643  |

**2-118**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 1515 | <b>d.</b> 6262 | <b>g.</b> 3939 |
| <b>b.</b> 808  | <b>e.</b> 9393 | <b>h.</b> 4141 |
| <b>c.</b> 8787 | <b>f.</b> 7070 | <b>i.</b> 1212 |

**2-119**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 4545 | <b>d.</b> 8181 | <b>g.</b> 2323 |
| <b>b.</b> 606  | <b>e.</b> 7878 | <b>h.</b> 3232 |
| <b>c.</b> 9999 | <b>f.</b> 3636 | <b>i.</b> 2525 |

**2-120**

- |                 |                 |                  |
|-----------------|-----------------|------------------|
| <b>a.</b> 4,848 | <b>d.</b> 63,63 | <b>g.</b> 0,3636 |
| <b>b.</b> 85,85 | <b>e.</b> 11110 | <b>h.</b> 929,2  |
| <b>c.</b> 303   | <b>f.</b> 1,919 | <b>i.</b> 898,9  |

**2-121**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 195  | <b>d.</b> 255  | <b>g.</b> 899  |
| <b>b.</b> 224  | <b>e.</b> 1224 | <b>h.</b> 6399 |
| <b>c.</b> 9999 | <b>f.</b> 3024 | <b>i.</b> 1599 |

**2-122**

- |                |                |                |
|----------------|----------------|----------------|
| <b>a.</b> 168  | <b>d.</b> 399  | <b>g.</b> 288  |
| <b>b.</b> 3599 | <b>e.</b> 624  | <b>h.</b> 323  |
| <b>c.</b> 5624 | <b>f.</b> 2499 | <b>i.</b> 2024 |

**2-123**

- |                 |                 |                 |
|-----------------|-----------------|-----------------|
| <b>a.</b> 39,9  | <b>d.</b> 562,4 | <b>g.</b> 143   |
| <b>b.</b> 2,55  | <b>e.</b> 202,4 | <b>h.</b> 999,9 |
| <b>c.</b> 16800 | <b>f.</b> 24,99 | <b>i.</b> 32,3  |

2-127 Michel €3000 en Jan €1500

2-128 €7,00

2-129 a. 75; b. 675 g; c. 120

2-130 3 l

2-131 3 : 17

2-132 9 : 13

2-133 2 : 3 : 7

2-134 B

2-135 Jos

2-136 Tampa Bay Rays

New York Yankees

Boston Red Sox

Toronto Bleu Jays

	verhouding	Decimaal getal	Breuk
	1 van de 4	0,25	$\frac{1}{4}$
2-137	3 : 4	0,75	$\frac{3}{4}$
	1 : 8	0,125	$\frac{1}{8}$
	3 : 25	0,12	$\frac{3}{25}$
	7 : 20	0,35	$\frac{7}{20}$

2-138 a. 1 : 4 b. 38400

2-139 a. €24; b. 8 : 12 : 3 : 1

2-140 7.470

		decimaal getal	=	breuk
2-141	a. 20%	= 0,2	=	$\frac{1}{5}$
	b. 7,5%	= 0,075	=	$\frac{3}{40}$
	c. 110%	= 1,1	=	$\frac{11}{10}$

2-142 15%

2-143 a. 45% b. 51% c. zuid

2-144 a. €33,15; b. €8,76

2-145 1 : 52

2-146  $\frac{1}{5}$

2-147 30%

2-148 C

2-149 E

2-150 E

2-151 B

2-152 B

2-153 A

2-154 €2250,-

2-155 154 m

2-156 €29,85

2-157 €8,20

2-158 25,5 uur

2-159 2491

2-160 25 cm

2-161 fabriek: €44928,-; winkel: €30888,-

2-162 50 gram; €2,36

2-163 €27,50; €15,-

2-164	€451,-
2-165	€26,88
2-166	Ellen 12
2-167	400
2-168	€651,-
2-169	6 kilo
2-170	15
2-171	15:30 uur
2-172	46 kg
2-173	€91,-

2-174	4,3 m
2-175	€795,-
2-176	21 min
2-177	VS+China of VS+China+Rusland of VS+India+Rusland
2-178	€425,50
2-179	6 maart
2-180	€7,80
2-181	Stoeltrans
2-182	€525,-
2-183	10 km

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

### 3 Algebra

**3-1** a.  $7x + 4y$

b.  $5a + 8b$

c.  $6a + 4\frac{1}{7}b$

d.  $12a - 4ab$

**3-2** a.  $x$

b.  $p$

c.  $6k + 5p$

d.  $5q + 4$

**3-3** a.  $6ab + 5a + 7b$

b.  $3x$

c.  $\frac{2}{15}x + 33y$

d.  $59x + 22y$

**3-4** a.  $12x + 7y$

b.  $44m + 21n$

c.  $63a + 23$

d.  $3p + 20q$

**3-5** a.  $3p + 3q$

b.  $8a + 5b$

c.  $8x + 8$

d.  $8p + 11q$

**3-6** a.  $x$

b.  $p$

c.  $6k + 5p$

d.  $-5q + 4$

**3-7** a.  $5a$

b.  $-5a$

**3-8** a.  $18q$

b.  $7c$

c.  $7x$

d.  $12x$

c.  $-3x$

d.  $-p$

e.  $2a + 3b$

f.  $27a + 33b$

g.  $2a + 4ab$

h.  $11p + 2q$

e.  $15a + 5b$

f.  $15m + 8n$

g.  $z + 12$

h.  $4c + 8d$

e.  $2ab$

f.  $x$

g.  $\frac{1}{3}abc + \frac{2}{3}xy$

h.  $16x + 5y$

e.  $30a + 5b$

f.  $46q + 40$

g.  $23p + 13q$

h.  $31x + 8y$

e.  $4x + 5y$

f.  $8p + 5$

g.  $4a + 4b$

h.  $14p + 9$

e.  $3a + 5b$

f.  $15m + 8n$

g.  $z + 12$

h.  $4c + 8d$

e.  $5p$

f.  $-6p$

e.  $-10p$

f.  $3x$

g.  $-5y$

h.  $-3c$

g.  $-8q$

h.  $-16z$



- |      |                            |           |                                    |          |
|------|----------------------------|-----------|------------------------------------|----------|
| 3-9  | a. $8q$                    | c. $-6p$  | e. $-10x$                          | g. $-7a$ |
|      | b. $8y$                    | d. $-18p$ | f. $0$                             | h. $-3z$ |
| 3-10 | a. $7x - 2y$               |           | e. $x - 6y$                        |          |
|      | b. $6x - 4y$               |           | f. $7x - y - 3$                    |          |
|      | c. $2x - 2y$               |           | g. $2y$                            |          |
|      | d. $2y$                    |           | h. $-x - 9y$                       |          |
| 3-11 | a. $-14a + 37b$            |           | e. $5\frac{1}{3}a - 5\frac{1}{3}b$ |          |
|      | b. $2a + 2b$               |           | f. $a + 6b$                        |          |
|      | c. $24a + 24b$             |           | g. $3a - 2b$                       |          |
|      | d. $0$                     |           | h. $-2a + 9b$                      |          |
| 3-12 | a. $12c + 7d$              |           | e. $-24$                           |          |
|      | b. $-12x - 2y$             |           | f. $-5p + 5q$                      |          |
|      | c. $4x + 15y$              |           | g. $10p + 19q$                     |          |
|      | d. $4b - 6c + 2p$          |           | h. $-5x$                           |          |
| 3-13 | a. $3x - 5y$               |           | e. $p - 13q$                       |          |
|      | b. $4a + 7b$               |           | f. $25 - 3c$                       |          |
|      | c. $9p + 8q$               |           | g. $7x - 7y$                       |          |
|      | d. $-4a - 8b$              |           | h. $-15k + 23$                     |          |
| 3-14 | a. $4a - 2b + 6c - 2d$     |           |                                    |          |
|      | b. $-6x - 2y + 6z$         |           |                                    |          |
|      | c. $-16p + 19q$            |           |                                    |          |
|      | d. $-3c + 4d - 19$         |           |                                    |          |
|      | e. $x + 5z$                |           |                                    |          |
|      | f. $2p + q - 5r + 8y + 7z$ |           |                                    |          |
|      | g. $2a - 12b - 8c$         |           |                                    |          |
|      | h. $38 - 3m - 4n$          |           |                                    |          |
| 3-15 | a. $48ab$                  |           | e. $32xy$                          |          |
|      | b. $52ax$                  |           | f. $2\frac{1}{2}xy$                |          |
|      | c. $256x^2$                |           | g. $35b$                           |          |
|      | d. $2y$                    |           | h. $4xy$                           |          |

**3-16** a.  $1\frac{1}{2}xy$

b.  $48a^2$

c.  $8abx$

d.  $2\frac{1}{2}pq$

**3-17** a.  $450xz$

b.  $36xyp$

c.  $52aps$

d.  $1000ars$

**3-18** a.  $-20bc$

b.  $64mn$

**3-19** a.  $116prs$

b.  $-144ab$

**3-20** a.  $36ab$

b.  $32cd$

**3-21** a.  $42ak$

b.  $-45xy$

**3-22** a.  $8ab$

b.  $80m$

**3-23** a.  $60abc$

b.  $280mn$

**3-24** a.  $64k$

b.  $-120pq$

**3-25** a.  $3x$

b.  $x$

c.  $3y$

d.  $2b$

**3-26** a.  $\frac{2}{3c}$

b.  $\frac{7}{10}m$

c.  $2b$

d.  $\frac{12a}{p}$

e.  $4xy$

f.  $20ab$

g.  $24xyz$

h.  $5xyz$

e.  $5xyz$

f.  $144pqy$

g.  $48pqs$

h.  $22tuv$

c.  $-14pq$

d.  $-9ab$

c.  $-280xyz$

d.  $6abcd$

c.  $28xy$

d.  $18xy$

c.  $66pq$

d.  $-6xy$

c.  $-35z$

d.  $72ab$

c.  $-350xyz$

d.  $-70xyz$

c.  $-240pqr$

d.  $-36xyz$

e.  $24xy$

f.  $-90xy$

e.  $81abcd$

f.  $120xyz$

e.  $30p$

f.  $2pq$

e.  $80ab$

f.  $18km$

e.  $-6b$

f.  $68cd$

e.  $12pqr$

f.  $-96pq$

e.  $-4abc$

f.  $56mn$

e.  $3$

f.  $1$

g.  $4z$

h.  $7\frac{a}{b}$

e.  $\frac{3}{2b}$

f.  $\frac{1}{r}$

g.  $\frac{3}{d}$

h.  $\frac{8}{s}$

3-27	a. -5	c. -4	e. $-\frac{1}{2a}$
	b. $-\frac{1}{4}$	d. $\frac{2}{3d}$	f. $-\frac{2x}{y}$
3-28	a. $-\frac{1}{4}$	c. $\frac{3a}{b}$	e. $\frac{7}{xy}$
	b. $\frac{2p}{qr}$	d. $\frac{b}{c}$	f. $-\frac{x}{2}$
3-29	a. $\frac{2a}{bc}$	c. $-\frac{7}{xy}$	e. -7b
	b. $\frac{1}{10q}$	d. $\frac{1}{2}$	f. $-\frac{k}{m}$
3-30	a. -13ap	c. 8xy	e. -6qy
	b. 30km	d. -ab	f. -62pq
3-31	a. 31ab	c. 32pq	e. -12xy
	b. 0	d. 11p	f. -8qr
3-32	a. 17	c. 14	e. -72
	b. 24	d. 1	f. -2
3-33	a. -18	c. $9\frac{1}{2}$	e. -6
	b. -34	d. 8	f. -2
3-34	a. 11	c. -8	e. 24
	b. -56	d. 76	f. -43
3-35	a. 20	c. 34	e. -47
	b. -27	d. 3	f. -2
3-36	a. 23	c. $13\frac{4}{5}$	e. $-7\frac{1}{2}$
	b. 5	d. -36	f. $-\frac{1}{5}$
3-37	a. 11	c. -228	e. -8
	b. 19	d. 0	f. 12
3-38	a. 8a	c. $6p^2$	e. $14x^3$
	b. $6y^4$	d. $21a^5$	f. $18p^2$
3-39	a. 2a	c. $4p^5$	e. $6q^4$
	b. $-3x^8$	d. $-a^5$	f. $12k^4$
3-40	a. $12a^9$	c. $11x^3 - 10x^2$	e. $-11c^5$
	b. $-6z^4$	d. $4a^2$	f. $5p^4 - 4p^5$
3-41	a. $30q^2$	c. $14m^4$	e. $-11q^6$
	b. 0	d. $7b^3$	f. m

3-42	a. $5x^3$	c. $-b^5$	e. $-10a^4$
	b. $q^2$	d. $-11a^2 - 4a$	f. $14m^2$
3-43	a. $15a^4$	c. $2c^2$	e. $7m^4 - 7m^8$
	b. $-9x^3$	d. $-12p^4$	f. $-5q^2$
3-44	a. $3a^2 - 5a^3$		e. $2c^4 - 3d^2$
	b. $-7x^5 + 14x$		f. $8p^3 - 7q^2$
	c. $-2m^2 - 1$		g. $14z^6 - 5z^4$
	d. $2a^4$		h. $9q^6 - 7$
3-45	a. $2a^5 + 7b^5$		e. $-11x^4 - x^3$
	b. $-12m^3 - 10$		f. $-12y^8$
	c. $4p^{10}$		g. $6c^4 - 2c^2$
	d. $6a^8 - 9a^3$		h. $8m^2 - 8n^2$
3-46	a. $x^7$	c. $x^{10}$	e. $p^5$
	b. $a^8$	d. $q^{12}$	f. $z^{10}$
3-47	a. $18a^9$	c. $77p^6$	e. $32x^{10}$
	b. $40q^{11}$	d. $81c^6$	f. $105x^4$
3-48	a. $42a^{12}$	c. $-24x^{13}$	e. $30p^{12}$
	b. $-3c^{10}$	d. $-64a^6$	f. $-36q^{14}$
3-49	a. $5^2 \cdot 2^{15}$	c. $6^6 \cdot 5^4$	e. $2^7 \cdot 3^{13}$
	b. $8^{13} \cdot 5$	d. $2^4 \cdot 3^8 \cdot 5^3$	f. $6^9 \cdot 7^7$
3-50	a. $-60p^3q^5$	c. $-54y^7z^9$	e. $-28a^7x^8$
	b. $50b^5m^8$	d. $-85k^5m^2$	f. $-18c^9d^{11}$
3-51	a. $15a^3b^{10}$	c. $-16x^7y^7$	e. $-8p^4q^2r^4$
	b. $90m^5n^5$	d. $-42b^8c^3$	f. $60a^6p^3$
3-52	a. $-48x^9y^7$	c. $32a^9b^4c^2$	e. $-22m^9n^6$
	b. $-40c^5q^2$	d. $24k^5x^4$	f. $-80a^5p^{10}$
3-53	a. $154p^8q^{13}$	c. $15a^3b^3$	e. $36c^2d^7$
	b. $10x^5y^4z^2$	d. $39b^3c^8d$	f. $-36p^{13}q^{13}$

- |  |  |  |  |  |  |  |   |   |  |   |   |  |  |   |   |  |  |   |
|--|--|--|--|--|--|--|---|---|--|---|---|--|--|---|---|--|--|---|
| <p><b>3-54</b> a. <math>-60x^7y^{11}</math><br/> b. <math>-54a^6b^{21}</math><br/> c. <math>140a^{11}p^{11}</math><br/> d. <math>-48a^9x^{18}</math></p> | <p><b>3-55</b> a. <math>-4x^2</math><br/> b. <math>5c^6</math></p> | <p><b>3-56</b> a. <math>\frac{a}{2}</math><br/> b. <math>3c^4</math></p> | <p><b>3-57</b> a. <math>3c^5</math><br/> b. <math>-20</math></p> | <p><b>3-58</b> a. <math>\frac{2a}{b}</math><br/> b. <math>\frac{4}{n}</math></p> | <p><b>3-59</b> a. <math>-x^5y</math><br/> b. <math>4b^3</math></p> | <p><b>3-60</b> a. <math>-7c</math><br/> b. <math>4q</math></p> | <p><b>3-61</b> a. <math>\frac{3m^3}{4n^2}</math><br/> b. <math>-\frac{7z}{y}</math></p> | <p><b>3-62</b> a. <math>2a^2b^3</math><br/> b. <math>9p^4q^6</math><br/> c. <math>3x^3y^3</math><br/> d. <math>64m^{10}n^4</math></p> | <p><b>3-63</b> a. <math>8^8</math><br/> b. <math>10^6</math></p> | <p><b>3-64</b> a. <math>-5^7</math><br/> b. <math>-9^7</math></p> | <p><b>3-65</b> a. <math>16</math><br/> b. <math>\frac{1}{16}</math></p> | <p><b>3-66</b> a. <math>-8</math><br/> b. <math>-33</math></p> | <p>c. <math>7z</math><br/> d. <math>13p^5</math><br/> c. <math>5</math><br/> d. <math>2x^3</math><br/> c. <math>6y^3</math><br/> d. <math>-4b^3</math><br/> c. <math>\frac{9q}{p}</math><br/> d. <math>-\frac{1}{2b}</math><br/> c. <math>-2p</math><br/> d. <math>-2x^2y</math><br/> c. <math>4p^4</math><br/> d. <math>5</math><br/> c. <math>-\frac{5}{2bq}</math><br/> d. <math>4p^3q</math></p> | <p>e. <math>-48p^8q^{12}</math><br/> f. <math>-63b^9y^{11}</math><br/> g. <math>240b^{10}c^8</math><br/> h. <math>-49q^9z^{15}</math></p> | <p>e. <math>-8</math><br/> f. <math>-32k^2</math><br/> e. <math>6y</math><br/> f. <math>5z</math><br/> e. <math>2a^4</math><br/> f. <math>7z^5</math><br/> e. <math>-\frac{4x}{y}</math><br/> f. <math>\frac{x}{3y}</math><br/> e. <math>2k^4m^3</math><br/> f. <math>3ab^3</math><br/> e. <math>-12</math><br/> f. <math>4q^5</math><br/> e. <math>\frac{p}{3a}</math><br/> f. <math>-\frac{1}{3a^2b^3}</math></p> | <p>e. <math>4c^5d^4</math><br/> f. <math>5p^4q^6</math><br/> g. <math>2m^3</math><br/> h. <math>32a^6b^{14}</math></p> | <p>c. <math>-11^5</math><br/> d. <math>2^6</math><br/> c. <math>4^{16}</math><br/> d. <math>-15^{45}</math><br/> c. <math>-27</math><br/> d. <math>-48</math><br/> c. <math>21</math><br/> d. <math>-57</math></p> | <p>e. <math>9^4</math><br/> f. <math>-3^{35}</math><br/> e. <math>12^4</math><br/> f. <math>-11^{111}</math><br/> e. <math>27</math><br/> f. <math>-1</math><br/> e. <math>-9</math><br/> f. <math>-22</math></p> |
|--|--|--|--|--|--|--|---|---|--|---|---|--|--|---|---|--|--|---|

<b>3-67</b>	<b>a.</b> $-2$	<b>c.</b> $-2\frac{3}{5}$	<b>e.</b> $3$
	<b>b.</b> $-62$	<b>d.</b> $-9$	<b>f.</b> $10\frac{2}{9}$
<b>3-68</b>	<b>a.</b> $-7\frac{4}{5}$	<b>c.</b> $35$	<b>e.</b> $111$
	<b>b.</b> $2$	<b>d.</b> $-57$	<b>f.</b> $9$
<b>3-69</b>	<b>a.</b> $-42$	<b>c.</b> $35$	<b>e.</b> $-68$
	<b>b.</b> $-6$	<b>d.</b> $42$	<b>f.</b> $19$
<b>3-70</b>	<b>a.</b> $-15 - 10a$	<b>c.</b> $-2a + 4b$	<b>e.</b> $-3a - 12b$
	<b>b.</b> $-3a + 1\frac{1}{2}b$	<b>d.</b> $-9a + 18b$	<b>f.</b> $-12a + 18$
<b>3-71</b>	<b>a.</b> $-3a + 3$	<b>c.</b> $3 - 3a$	<b>e.</b> $-3 - 9a$
	<b>b.</b> $3a - 3b$	<b>d.</b> $-3a + 6$	<b>f.</b> $6a - 6b$
<b>3-72</b>	<b>a.</b> $-5a^2 + 5pq$	<b>c.</b> $6a^2b - 6$	<b>e.</b> $6c - 8d$
	<b>b.</b> $-4ab + 4pq$	<b>d.</b> $-ab + 3pq$	<b>f.</b> $5a^2 - 5bc$
<b>3-73</b>	<b>a.</b> $25 - 25a$	<b>c.</b> $-3 - 15a$	<b>e.</b> $9a + 3$
	<b>b.</b> $9a - 3$	<b>d.</b> $5 + 20z$	<b>f.</b> $-3 - 12z^2$
<b>3-74</b>	<b>a.</b> $4a^2 + 12$	<b>c.</b> $-12a^2 + 8$	<b>e.</b> $3a - 18b^2$
	<b>b.</b> $-a - b$	<b>d.</b> $-2a + 2b$	<b>f.</b> $3a^2 + 6b^2$
<b>3-75</b>	<b>a.</b> $4a + 8b^2 + 4c$	<b>c.</b> $-3 + 21c + 3z$	<b>e.</b> $-64a + 32c$
	<b>b.</b> $-6a + 12c$	<b>d.</b> $5p + 5q - 25$	<b>f.</b> $-7a - 42b + 21$
<b>3-76</b>	<b>a.</b> $ap + aq$	<b>c.</b> $ap - aq$	<b>e.</b> $2ap + aq$
	<b>b.</b> $2ap - aq$	<b>d.</b> $2ap + 3aq$	<b>f.</b> $-2ap + 3aq$
<b>3-77</b>	<b>a.</b> $4a - 8b$	<b>c.</b> $-4a + 8b$	<b>e.</b> $4 + 8c - 12d$
	<b>b.</b> $-24 + 48a$	<b>d.</b> $2a + 3ac$	<b>f.</b> $2ac - 3a$
<b>3-78</b>	<b>a.</b> $a^2 + ab$	<b>c.</b> $ab + b^2$	<b>e.</b> $2ab + b^2$
	<b>b.</b> $2ab - 2b^2$	<b>d.</b> $4ab + 2b^2$	<b>f.</b> $4ab - 2b^2$
<b>3-79</b>	<b>a.</b> $2a - 6ac$	<b>c.</b> $15a + 10ad^2$	<b>e.</b> $3ac - 6cd$
	<b>b.</b> $6ac - 15cd^2$	<b>d.</b> $4az - 8bz$	<b>f.</b> $3ak + 6kz$
<b>3-80</b>	<b>a.</b> $4ab - 6abc$	<b>c.</b> $-3bcx + 6bcy$	<b>e.</b> $-8xy + 4xyt^2$
	<b>b.</b> $-6x^2 + 12x^2t$	<b>d.</b> $8ab - 10aby$	<b>f.</b> $a^2bc - 3a^2bd$
<b>3-81</b>	<b>a.</b> $2a + 4ab + 6ac$	<b>c.</b> $-2ap - 3aq + a$	<b>e.</b> $2a^2b + 3a^2c$
	<b>b.</b> $xy^2 - 3x^2y^2 + 4y^2$	<b>d.</b> $xy^2 - 3x^2y^2 + 4y^2$	<b>f.</b> $x^2z^2 + y^2z^2$

3-82	a. $-4kp + 12kq^2$ b. $-2x^2yz^2 - 3x^2y$	c. $-8kp - 20kz$ d. $-ab + abc + abd$	e. $-2x^2yz^2 + 3x^2y$ f. $9xy + 9xz - 9x$
3-83	a. $-3a^2 + 9a^2b$ b. $4a^2 + 4a^2b$	c. $-3a^2 + 3a^2b$ d. $3a^2 + 4a^2c$	e. $-6a^2b + 2ab$ f. $15a - 3a^2$
3-84	a. $-3a^4 - a^4p$ b. $15a^2 - 25a^4$	c. $-9a^4 - 3a^4p$ d. $-6a^2 + 4a^3$	e. $9a^3 + 9a^4$ f. $-6a^2b + 4a^4$
3-85	a. $ab + b^2$ b. $-3a^3b + 3ab^2$	c. $3ab - 3b^2$ d. $3a^2b - 6ab^2$	e. $3a^2b - 2ab^2$ f. $a^2b^2 + ab$
3-86	a. $-5a^2 + 3a$ b. $a^3 - a^4$	c. $-12a^2 + 8a^2c$ d. $-3c^3 - 3c^2$	e. $a^2 - a$ f. $-3c^2 - 3c^3$
3-87	a. $-4a^2c + 4a^2c^2$ b. $2p^3 - 4p^2q$	c. $-3a^2c - 6a^2c^2$ d. $4p^3 - 4p^3q$	e. $-a^3 + 3a^2cd$ f. $a^2p^2 - 3ap^3$
3-88	a. $-3p^3q + 9p^3q^2$ b. $4c^3 + 12c^2$	c. $3p^4 - 3p^3q$ d. $-4a^2c^2 - 16acz$	e. $-3p^4 + 9p^4q$ f. $-4a^3c^2 + 16a^3c$
3-89	a. $3x^2y^2 - 9x^3y^2$ b. $10px^2y - 15x^4y$	c. $-5px^2y - 5x^2y^3$ d. $-5x^3y^2 - 3x^2y^2$	e. $10pxy^2 - 15xy^3$ f. $-6y^3 + 9y^4$
3-90	a. $4x^3 - 4x^2$ b. $6x^4 - 6x^2 + 18x$	c. $3xy^2 - 6x^3y$ d. $2x^4 - 6x^3 + 8x^2$	e. $20x^3y^2 + 24x^3y$ f. $-16x^2y - 16x^3 - 16x^3y$
3-91	a. $p^3 - p^2$ b. $-6y^3 + 9y^4$	c. $2p^3 - 2p^2$ d. $-2xy^2 - 2y^4 - 2xy^3$	e. $-3x^3y^2 - 3x^2y^2$ f. $-3y^4 - 3y^3 + 3y^2$
3-92	a. $15 - 2x$ b. $2x + 4$	c. $6x - 15$ d. $6x - 7$	e. $4x - 7$ f. $11x - 11$
3-93	a. $ac + ad + bc + bd$ b. $ac + 3a + bc + 3b$	c. $ap + aq + bp + bq$ d. $ab + ac + 3b + 3c$	e. $ce + cf + de + df$ f. $3a + ad + 3b + bd$
3-94	a. $x^2 + x - 6$ b. $p^2 - 5p + 6$	c. $x^2 + 6x + 5$ d. $p^2 + 3p + 2$	e. $x^2 + 7x + 6$ f. $y^2 + 10y + 21$

3-95

a. $6pt + 4pv + 3qt + 2qv$	c. $6pt + 4p + 3qt + 2q$	e. $10ab + 15a + 8b + 12$
b. $4ax + 8bx + ay + 2by$	d. $4xy - 4xz + 4y - 4z$	f. $6 + 9b + 8a + 12ab$

3-96

a. $2ac + 2ad + bc + bd$	c. $4ac + 2ad + 2bc + bd$	e. $y^2 + 10y + 16$
b. $k^2 + 4k - 5$	d. $2b + 1 + 6ab + 3a$	f. $4p - 2pt + 12q - 6qt$

3-97

a. $4a^2 - 9b^2$	c. $25a^2 - 60a + 36$	e. $x^4 - 16$
b. $1 - x^4$	d. $x^4 - 256$	f. $x^4 - 32x^2 + 256$

3-98

a. $3(x + 2)$	c. $3(x + 4)$	e. $3(x + 1)$
b. $3(2a + 3b)$	d. $4(4a - 5b)$	f. $16(a - 1)$

3-99

a. $7(5x + y)$	c. $35(x + 2y)$	e. $-8(5x - 4y)$
b. $-8(5 - 4y)$	d. $16(1 + x)$	f. $11(x - 8y)$

3-100

a. $25x(c - y)$	c. $25y(c - x)$	e. $20x(5y - 1)$
b. $2p(9q + 16y)$	d. $20(5x - y)$	f. $3xy(z - 2)$

3-101

a. $2a(2b + 3)$	c. $2b(9 - 8c)$	e. $7y(x + z)$
b. $7(xy - pq)$	d. $4z(2x - 1)$	f. $8y(2 + z)$

3-102

a. $4(a + 2b + 4c)$	c. $5(2x + 5y + 6z)$	e. $3xy(1 - 2z)$
b. $22xy(2z - 3t)$	d. $8x(3y + 4)$	f. $10a(10 - 3b)$

3-103

a. $x(35x + 16)$	c. $9x^2(4 - 6x)$	e. $3x^6(5x - 1)$
b. $16x^3(5x^2 - 2)$	d. $3(5x^2 - 4y)$	f. $4x^2(4xy + 1)$

3-104

a. $x(x + 3)$	c. $x(x - 6)$	e. $3x(x - 2)$
b. $3x(1 - 2x)$	d. $3x(2x - 1)$	f. $3(2x^2 - 1)$

3-105

a. $8(x + y)$	c. $7c^2d(2d - 3c)$	e. $9x^2y^2(x + 3y)$
b. $9x^2y(2y^2 + 3)$	d. $10xy(16x + 15y^2)$	f. $3x^2(1 + 2x - 3y)$

3-106

a. $4xy(4x^2 + 1)$	c. $xy(7xy - 8)$	e. $2x^2(2x + 1)$
b. $5x(x - 2)$	d. $2x^2(4x^2 + 4x + 3y)$	f. $4x^7y^3(z - 2x)$

3-107 D

3-108 C

3-109 B

3-110 B

3-111 C

3-112 A

3-113 3 maanden

3-114 910

3-115 30 cent

3-116 1500

3-117 20%

3-118 23:05 uur



3-119	56	3-127	162	3-135	4,5 km
3-120	112,5 km	3-128	€64,45	3-136	€18,20
3-121	€168,-	3-129	20×	3-137	6 uur
3-122	€0,55	3-130	34	3-138	Bioschoon
3-123	4 juli	3-131	Johan, 14	3-139	blauw
3-124	5 uur 10 min	3-132	2	3-140	10:35 uur
3-125	€8,50	3-133	€0,25	3-141	27 knikkers
3-126	21.000	3-134	360 liter	3-142	6 ons

#### 4 Vergelijkingen

4-1	a. -4	c. 2	e. $7\frac{1}{3}$
	b. 5	d. -8	f. $\frac{2}{3}$
4-2	a. $5\frac{1}{2}$	c. $-1\frac{1}{2}$	e. $\frac{1}{5}$
	b. $3\frac{1}{3}$	d. -7	f. -2
4-3	a. 28	c. $1\frac{1}{2}$	e. -10
	b. 3	d. 8	f. $-1\frac{1}{2}$
4-4	a. 22	c. -4	e. 0
	b. 5	d. 11	f. 8
4-5	a. -1	c. 12	e. 1
	b. 22	d. -1	f. -15
4-6	a. 1	c. 15	e. -1
	b. -15	d. 15	f. 1
4-7	a. 22	c. $-\frac{1}{2}$	e. 0
	b. 2	d. -4	f. 80
4-8	a. 2	c. -2	e. $\frac{1}{2}$
	b. 0	d. -2	f. $-6\frac{1}{2}$
4-9	a. 2	c. 2	e. 3
	b. -2	d. 1	f. 0
4-10	a. 2	c. $1\frac{1}{2}$	e. 3
	b. $3\frac{1}{3}$	d. 1	f. 6
4-11	a. -3	c. 2	e. $2\frac{1}{2}$
	b. $5\frac{1}{2}$	d. 1	f. $\frac{1}{6}$

- |             |                     |                   |                   |
|-------------|---------------------|-------------------|-------------------|
| <b>4-12</b> | a. $\frac{1}{2}$    | c. $-2$           | e. $0$            |
|             | b. $-1\frac{1}{2}$  | d. $2$            | f. $-\frac{2}{3}$ |
| <b>4-13</b> | a. $6$              | c. $5$            | e. $14$           |
|             | b. $6$              | d. $-2$           | f. $-9$           |
| <b>4-14</b> | a. $-1$             | c. $\frac{1}{3}$  | e. $\frac{1}{3}$  |
|             | b. $1$              | d. $-3$           | f. $-3$           |
| <b>4-15</b> | a. $2$              | c. $1$            | e. $18$           |
|             | b. $5$              | d. $0$            | f. $-1$           |
| <b>4-16</b> | a. $-\frac{6}{5}$   | c. $-6$           | e. $\frac{5}{4}$  |
|             | b. $-4\frac{1}{2}$  | d. $3$            | f. $\frac{1}{2}$  |
| <b>4-17</b> | a. $10$             | c. $-2$           | e. $3$            |
|             | b. $-3$             | d. $1$            | f. $-2$           |
| <b>4-18</b> | a. $-4\frac{1}{2}$  | c. $-1$           | e. $5\frac{1}{2}$ |
|             | b. $-\frac{1}{3}$   | d. $-1$           | f. $0$            |
| <b>4-19</b> | a. $-4$             | c. $5$            | e. $0$            |
|             | b. $1\frac{2}{3}$   | d. $-1$           | f. $2$            |
| <b>4-20</b> | a. $\frac{1}{2}$    | c. $9$            | e. $0$            |
|             | b. $\frac{1}{4}$    | d. $1$            | f. $0$            |
| <b>4-21</b> | a. $-5$             | c. $\frac{3}{2}$  | e. $-4$           |
|             | b. $1$              | d. $3\frac{1}{2}$ | f. $28$           |
| <b>4-22</b> | a. $-\frac{1}{2}$   |                   | d. $-36$          |
|             | b. $-2$             |                   | e. $\frac{1}{5}$  |
|             | c. $8$              |                   | f. $-\frac{5}{2}$ |
| <b>4-23</b> | a. $8$              | c. $-8$           | e. $0$            |
|             | b. $1$              | d. $-8$           | f. $8$            |
| <b>4-24</b> | a. $8$              | c. $12$           | e. $3$            |
|             | b. $21$             | d. $-1$           | f. $1$            |
| <b>4-25</b> | a. $20$             | c. $-4$           | e. $4$            |
|             | b. $28$             | d. $12$           | f. $6$            |
| <b>4-26</b> | a. $2$              | c. $-2$           | e. $35$           |
|             | b. $-13\frac{1}{3}$ | d. $-12$          | f. $-6$           |

- |             |                           |                            |                           |
|-------------|---------------------------|----------------------------|---------------------------|
| <b>4-27</b> | <b>a.</b> $-36$           | <b>c.</b> $9$              | <b>e.</b> $20$            |
|             | <b>b.</b> $16$            | <b>d.</b> $-22\frac{2}{3}$ | <b>f.</b> $-35$           |
| <b>4-28</b> | <b>a.</b> $-1\frac{1}{2}$ | <b>c.</b> $-2$             | <b>e.</b> $1$             |
|             | <b>b.</b> $3$             | <b>d.</b> $-12\frac{1}{2}$ | <b>f.</b> $70$            |
| <b>4-29</b> | <b>a.</b> $0$             | <b>c.</b> $-1\frac{2}{3}$  | <b>e.</b> $\frac{2}{3}$   |
|             | <b>b.</b> $0$             | <b>d.</b> $-5$             | <b>f.</b> $6$             |
| <b>4-30</b> | <b>a.</b> $-2$            | <b>c.</b> $3\frac{1}{3}$   | <b>e.</b> $1\frac{1}{4}$  |
|             | <b>b.</b> $\frac{1}{6}$   | <b>d.</b> $-1$             | <b>f.</b> $1$             |
| <b>4-31</b> | <b>a.</b> $2$             | <b>c.</b> $3$              | <b>e.</b> $-19$           |
|             | <b>b.</b> $6$             | <b>d.</b> $1$              | <b>f.</b> $3$             |
| <b>4-32</b> | <b>a.</b> $4$             | <b>c.</b> $3\frac{1}{3}$   | <b>e.</b> $\frac{1}{3}$   |
|             | <b>b.</b> $-1$            | <b>d.</b> $-1$             | <b>f.</b> $-3$            |
| <b>4-33</b> | <b>a.</b> $-2\frac{1}{5}$ | <b>c.</b> $1\frac{1}{2}$   | <b>e.</b> $-1$            |
|             | <b>b.</b> $-\frac{1}{2}$  | <b>d.</b> $0$              | <b>f.</b> $0$             |
| <b>4-34</b> | <b>a.</b> $0$             | <b>c.</b> $1\frac{1}{3}$   | <b>e.</b> $-\frac{3}{4}$  |
|             | <b>b.</b> $0$             | <b>d.</b> $-1$             | <b>f.</b> $-1$            |
| <b>4-35</b> | <b>a.</b> $1$             |                            | <b>d.</b> $-2$            |
|             | <b>b.</b> $5$             |                            | <b>e.</b> $1$             |
|             | <b>c.</b> $-2\frac{1}{4}$ |                            | <b>f.</b> $-2\frac{1}{2}$ |
| <b>4-36</b> | <b>a.</b> $-6$            |                            | <b>d.</b> $-\frac{1}{2}$  |
|             | <b>b.</b> $0$             |                            | <b>e.</b> $-\frac{3}{5}$  |
|             | <b>c.</b> $0$             |                            | <b>f.</b> $-5$            |
| <b>4-37</b> | <b>a.</b> $2$             |                            | <b>d.</b> $1$             |
|             | <b>b.</b> $\frac{8}{5}$   |                            | <b>e.</b> $-\frac{9}{2}$  |
|             | <b>c.</b> $-\frac{1}{2}$  |                            | <b>f.</b> $-2\frac{1}{2}$ |
| <b>4-38</b> | <b>a.</b> $\frac{6}{5}$   |                            | <b>c.</b> $-\frac{9}{8}$  |
|             | <b>b.</b> $-\frac{1}{2}$  |                            | <b>d.</b> $6$             |
| <b>4-39</b> | <b>a.</b> $5$             | <b>c.</b> $\frac{1}{2}$    | <b>e.</b> $9$             |
|             | <b>b.</b> $-20$           | <b>d.</b> $-10$            | <b>f.</b> $3$             |
| <b>4-40</b> | <b>a.</b> $-5$            | <b>c.</b> $-\frac{2}{3}$   | <b>e.</b> $-1$            |
|             | <b>b.</b> $-\frac{1}{3}$  | <b>d.</b> $4$              | <b>f.</b> $2$             |

- |      |   |                     |                    |
|------|---|---------------------|--------------------|
| 4-41 | a. 0                                    | c. $-\frac{3}{4}$   | e. -13             |
|      | b. $\frac{13}{9}$                       | d. $-\frac{17}{5}$  | f. 2               |
| 4-42 | a. 3                                    | c. $\frac{7}{5}$    | e. $\frac{5}{4}$   |
|      | b. -2                                   | d. 6                | f. 3               |
| 4-43 | a. -1                                   |                     | c. 10              |
|      | b. $\frac{7}{2}$                        |                     | d. $\frac{1}{2}$   |
| 4-44 | a. 4                                    | c. 2                | e. 1               |
|      | b. 6                                    | d. -8               | f. $-\frac{2}{3}$  |
| 4-45 | a. -14                                  | c. -11              | e. $-\frac{2}{7}$  |
|      | b. $\frac{1}{6}$                        | d. 5                | f. -4              |
| 4-46 | a. alles is goed                        |                     | d. niets is goed   |
|      | b. $1\frac{1}{5}$                       |                     | e. $12\frac{1}{3}$ |
|      | c. $-1\frac{1}{2}$                      |                     | f. $3\frac{1}{2}$  |
| 4-47 | a. $-\frac{1}{10}$                      | c. $-\frac{1}{3}$   | e. $\frac{3}{4}$   |
|      | b. $\frac{1}{4}$                        | d. 1                | f. $2\frac{1}{4}$  |
| 4-48 | a. $2\frac{2}{3}$                       | c. $-4\frac{9}{14}$ | e. $22\frac{2}{5}$ |
|      | b. $-5\frac{1}{2}$                      | d. $1\frac{4}{7}$   | f. $2\frac{7}{25}$ |
| 4-49 | a. $-2x - 4$                            | c. $-2x - 12$       | e. $8x - 4$        |
|      | b. $-3p - 1$                            | d. $-11p - 30$      | f. $-3p + 1$       |
| 4-50 | a. 18                                   |                     | d. $-3\frac{1}{2}$ |
|      | b. $2\frac{1}{2}$                       |                     | e. 0               |
|      | c. -18                                  |                     | f. $\frac{7}{8}$   |
| 4-51 | a. 4                                    |                     | d. 6               |
|      | b. -1                                   |                     | e. $1\frac{1}{2}$  |
|      | c. -5                                   |                     | f. 2               |
| 4-52 | 4                                       |                     |                    |
| 4-53 | -4                                      |                     |                    |
| 4-54 | €77,-                                   |                     |                    |
| 4-55 | $x = 1 + \frac{1}{2}x$                  |                     |                    |
| 4-56 | $x + 2x - 2 + 5 = 102$                  |                     |                    |
| 4-57 | $2450 - x - (2450 - x) : 2 - 200 = 300$ |                     |                    |
| 4-58 | $2x + 10 = 4 \times 8$                  |                     |                    |

<b>4-59</b>	$10 + 25 + 7 + 3x = 2 \times 50 - 20$		
<b>4-60</b>	$4x \times 0,75 + 4 \times 2 + 4 \times 0,25 + 2 \times 0,5 = 50 - 7$		
<b>4-61</b>	$x - \frac{1}{3}x + 25 - \frac{1}{3}x = 125$		
<b>4-62</b>	$4 + 8 + 2 + 12 + \frac{1}{3}x = x$		
<b>4-63</b>	$12 \times 3 + x \times 3 + 4 = 2 \times 30 - 8$		
<b>4-64</b>	$5 \times x - 26 = 3 \times x - 2$		
<b>4-65</b>	$\frac{1}{3}x + \frac{1}{2}x + 1 + 4 = x$		
<b>4-66</b>	$x + (x + 2) : 2 - 3 = 25$		
<b>4-67</b>	$(x - 5) \times 2 + 16 + 5 = 45$		
<b>4-68</b>	$(x + 0,4) : 2 + 2,5 = 3,7$		
<b>4-69</b>	Stel dat Jaime $x$ zakgeld heeft: $(x + 3,5) \times 2 + x = 17,5$		
<b>4-70</b>	$\frac{1}{2}x + 5 + 3,75 + 0,75 + 1,75 = x$		
<b>4-71</b>	$5x + 3 + 22 = 120$		
<b>4-72</b>	$x \times 6 - 2 \times 6 - 7,5 = 64,5$		
<b>4-73</b>	$x \times 3 + 5 \times 1,75 + 14,25 = 50$		
<b>4-74</b>	<p>a. geen oplossing</p> <p>b. geen oplossing</p>	<p>c. alles is goed</p> <p>d. alles is goed</p>	
<b>4-75</b>	<p>a. geen oplossing</p> <p>b. <math>1\frac{1}{2}</math></p>	<p>c. alles is goed</p> <p>d. geen oplossing</p>	
<b>4-76</b>	<p>a. <math>\frac{3}{4}</math></p> <p>b. geen oplossing</p>	<p>c. alles is goed</p> <p>d. 1</p>	
<b>4-77</b>	<p>a. niets is goed</p> <p>b. 2</p>	<p>c. niets is goed</p> <p>d. -4</p>	
<b>4-78</b>	D	<b>4-90</b>	even duur
<b>4-79</b>	C	<b>4-91</b>	€0,30
<b>4-80</b>	C	<b>4-92</b>	189 liter
<b>4-81</b>	C	<b>4-93</b>	€0,40
<b>4-82</b>	E	<b>4-94</b>	5
<b>4-83</b>	D	<b>4-95</b>	30 liter
<b>4-84</b>	€36.000	<b>4-96</b>	€1,50
<b>4-85</b>	€67,50	<b>4-97</b>	30,5 kg
<b>4-86</b>	4 januari	<b>4-98</b>	€49,50
<b>4-87</b>	46,5 kg	<b>4-99</b>	Lodo
<b>4-88</b>	20 uur	<b>4-100</b>	9
<b>4-89</b>	$1\frac{1}{3}$	<b>4-101</b>	€42,50
		<b>4-102</b>	13 jaar
		<b>4-103</b>	€16,80
		<b>4-104</b>	12,5 km
		<b>4-105</b>	4 uur, 4 min
		<b>4-106</b>	€450,-
		<b>4-107</b>	1134 kg
		<b>4-108</b>	1,4 m
		<b>4-109</b>	6 april
		<b>4-110</b>	Anton
		<b>4-111</b>	144 liter
		<b>4-112</b>	zaterdag
		<b>4-113</b>	€0,29

## 5 Meetkunde

- 5-1  $28^\circ$   
 5-2  $12^\circ$   
 5-3  $57^\circ$   
 5-4  $66^\circ$   
 5-5  $47^\circ 22'$   
 5-6  $86^\circ$   
 5-7  $64^\circ 10'$   
 5-8  $90^\circ, 45^\circ$  en  $45^\circ$   
 5-9 ja  
 5-16  $\angle A_1 = \angle DAC, \angle A_2 = \angle DAB, \angle B = \angle ABC, \angle C_1 = \angle ACE, \angle C_2 = \angle BCE$   
 etc.  
 5-17  $\angle ACF = 45^\circ$  en  $\angle BCF = 9^\circ$   
 5-18  $23^\circ, 34^\circ$   
 5-19  $42^\circ, 18^\circ, 120^\circ$   
 5-20  $97^\circ, 83^\circ$   
 5-21  $110^\circ 30'$   
 5-22  $119^\circ$   
 5-23 6, twee aan twee gelijk.  
 5-24  $120^\circ; 90^\circ, 135^\circ$  en  $135^\circ$   
 5-25  $132^\circ$   
 5-26  $24^\circ$   
 5-27  $38^\circ 25'$   
 5-28  $36^\circ$   
 5-29  $30^\circ$   
 5-30  $37^\circ 30'$   
 5-31  $71^\circ$   
 5-32  $30^\circ$   
 5-33  $21^\circ$   
 5-45 **a.** ZHZ **b.** HZH **c.** ZHH **d.** ZHH **e.** ZZR  
 5-46 **a.** ZZZ **b.** ZHH **c.** ZHZ **d.** ZHH maar ook HZH  
 5-47 één zijde  
 5-48 één zijde  
 5-51  $\angle A_1 = \angle A_3 = \angle B_1 = \angle B_3 = 65^\circ$  en  $\angle A_2 = \angle A_4 = \angle B_2 = \angle B_4 = 115^\circ$   
 5-52  $\angle A_2, \angle A_4, \angle B_2$  en  $\angle B_4$   
 5-53  $\angle A_3, \angle B_1$  en  $\angle B_3$   
 $\angle A_1, \angle A_3, \angle B_1$  en  $\angle B_3$   
 5-56  $75^\circ$

5-57	85°
5-58	55°
5-59	65°, 60° en 55°
5-60	70°, 65°
5-61	$PT^2 = ST^2 + PS^2$
5-62	$AM^2 = AS^2 - MS^2$
5-63	$CD^2 = BC^2 - BD^2$ en $CD^2 = AC^2 - AD^2$
5-64	$QR^2 = PQ^2 + PR^2$

5-65	5	5-76	Oranga Spleijt	5-88	5
5-66	13	5-77	20%	5-89	€101,50
5-67	15	5-78	925 km	5-90	70
5-68	omtrek: 280; oppervlakte 2520	5-79	60.000	5-91	450 m
5-69	€2400,-	5-80	€2.234,-	5-92	840
5-70	14:17 uur	5-81	€465,-	5-93	rood
5-71	€315,35	5-82	75%	5-94	auto 3
5-72	€0,45	5-83	"Regenboog"	5-95	43 min
5-73	12 cm	5-84	€396,-	5-96	8750 hl
5-74	65	5-85	3 uur, 15 min	5-97	€73,92
5-75	7 september	5-86	8	5-98	€300,-
		5-87	zaterdag		

## 6 Kangoeroe opgaven

6-1	B	6-14	E	6-27	€498,40
6-2	B	6-15	B	6-28	€487,50
6-3	D	6-16	A	6-29	€397,50
6-4	E	6-17	C	6-30	100%
6-5	B	6-18	C	6-31	19 manden
6-6	D	6-19	B	6-32	€1,52
6-7	A	6-20	C	6-33	144 m
6-8	C	6-21	C	6-34	€16,35
6-9	E	6-22	B	6-35	5,4 km/uur
6-10	D	6-23	D	6-36	36,25
6-11	A	6-24	B	6-37	€3074,50
6-12	C	6-25	8:45 uur	6-38	Inge 14,2
6-13	A	6-26	allen evenveel	6-39	5,95 m

6-40 €159,90  
 6-41 26 kg  
 6-42 19:53 uur  
 6-43 12  
 6-44 4 kg

6-45 9  
 6-46 1875  
 6-47 Michel, 22  
 6-48 €21,-  
 6-49 €640,-

6-50 18 min  
 6-51 1,4  
 6-52 €43,50  
 6-53 12 maart  
 6-54 €640,-