

## 4 Oefeningen

1 Reken uit.

a  $\left(\frac{2}{3}\right)^2 = \frac{4}{9}$

i  $\left(\frac{1}{3}\right)^3 = \frac{1}{27}$

b  $\left(\frac{2}{3}\right)^3 = \frac{8}{27}$

j  $\frac{2^3}{3^2} = \frac{8}{9}$

c  $\frac{2^2}{3} = \frac{4}{3}$

k  $\frac{2^4}{4^2} = \frac{16}{16} = 1$

d  $\left(\frac{9}{4}\right)^2 = \frac{81}{16}$

l  $\left(\frac{1}{10}\right)^3 = \frac{1}{1000}$

e  $\frac{9^2}{4} = \frac{81}{4}$

m  $\left(\frac{4}{5}\right)^3 = \frac{64}{125}$

f  $\left(\frac{5}{7}\right)^2 = \frac{25}{49}$

n  $\left(\frac{5}{9}\right)^2 = \frac{25}{81}$

g  $\left(\frac{1}{2}\right)^4 = \frac{1}{16}$

o  $\frac{1^6}{6^1} = \frac{1}{6}$

h  $\left(\frac{1}{4}\right)^2 = \frac{1}{16}$

p  $\left(\frac{4}{25}\right)^0 = 1$

2 Reken uit.

a  $\left(-\frac{2}{3}\right)^3 = -\frac{8}{27}$

i  $\left(-\frac{4}{3}\right)^2 = \frac{16}{9}$

b  $\left(-\frac{2}{7}\right)^2 = \frac{4}{49}$

j  $\left(-\frac{1}{2}\right)^5 = -\frac{1}{32}$

c  $\left(-\frac{5}{9}\right)^2 = \frac{25}{81}$

k  $\frac{(-4)^2}{(-4)^3} = \frac{16}{-64} = -\frac{1}{4}$

d  $-\frac{2^2}{3} = -\frac{4}{3}$

l  $-\frac{4^2}{3} = -\frac{16}{3}$

e  $-\left(\frac{3}{4}\right)^2 = -\frac{9}{16}$

m  $-\frac{4^2}{5} = -\frac{16}{5}$

f  $-\frac{(-1)^2}{(-2)^1} = -\frac{1}{-2} = \frac{1}{2}$

n  $-\left(-\frac{5}{3}\right)^2 = -\frac{25}{9}$

g  $\frac{(-1)^6}{(-6)^1} = \frac{1}{-6} = -\frac{1}{6}$

o  $-\frac{9^2}{2} = -\frac{81}{2}$

h  $-\frac{4^2}{3} = -\frac{16}{3}$

p  $\frac{(-2)^0}{-4^0} = \frac{1}{-1} = -1$

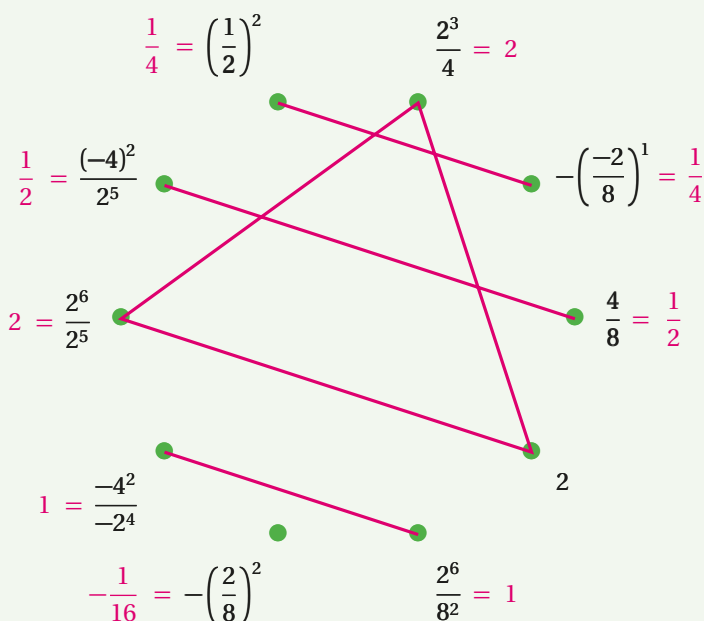
**3** Ga na (zonder uit te rekenen) of voor volgende machten de resultaten positief of negatief zijn.

a $(-4)^4$	<input checked="" type="radio"/> + <input type="radio"/> -	f $-(-59,3)^3$	<input checked="" type="radio"/> + <input type="radio"/> -	k $-10,637^3$	<input checked="" type="radio"/> + <input type="radio"/> -
b $(-5)^3$	<input checked="" type="radio"/> + <input type="radio"/> -	g $-50\,185^2$	<input checked="" type="radio"/> + <input type="radio"/> -	l $(-975)^{20}$	<input checked="" type="radio"/> + <input type="radio"/> -
c $(-15)^2$	<input checked="" type="radio"/> + <input type="radio"/> -	h $-(-3)^3$	<input checked="" type="radio"/> + <input type="radio"/> -	m $(-189)^{31}$	<input checked="" type="radio"/> + <input type="radio"/> -
d $-56,78^0$	<input checked="" type="radio"/> + <input type="radio"/> -	i $-(-3^3)$	<input checked="" type="radio"/> + <input type="radio"/> -	n $-(-191)^{40}$	<input checked="" type="radio"/> + <input type="radio"/> -
e $-(1,43)^0$	<input checked="" type="radio"/> + <input type="radio"/> -	j $-(-3)^4$	<input checked="" type="radio"/> + <input type="radio"/> -	o $-(-567)^{51}$	<input checked="" type="radio"/> + <input type="radio"/> -

**4** Bereken de volgende machten.

a $(0,2)^2 =$ <u>0,04</u>	f $(0,25)^2 =$ <u>0,0625</u>	k $(-0,1)^4 =$ <u>0,0001</u>
b $(0,3)^2 =$ <u>0,09</u>	g $(-0,5)^3 =$ <u>-0,125</u>	l $(-0,2)^5 =$ <u>-0,00032</u>
c $(-0,2)^3 =$ <u>-0,008</u>	h $(-1,1)^2 =$ <u>1,21</u>	m $(0,1)^5 =$ <u>0,00001</u>
d $(-0,5)^2 =$ <u>0,25</u>	i $(-0,3)^4 =$ <u>0,0081</u>	n $(-0,1)^6 =$ <u>0,000001</u>
e $(1,2)^2 =$ <u>1,44</u>	j $(-0,5)^4 =$ <u>0,0625</u>	o $(0,3)^0 =$ <u>1</u>

**5** Verbind de opgaven die hetzelfde resultaat hebben.



**6** Bereken volgende vierkantswortels.

a $\sqrt{81} =$ <u>9</u>	e $-\sqrt{\frac{1}{121}} =$ <u><math>-\frac{1}{11}</math></u>
b $\sqrt{\frac{4}{25}} =$ <u><math>\frac{2}{5}</math></u>	f $\frac{\sqrt{49}}{16} =$ <u><math>\frac{7}{16}</math></u>
c $\sqrt{\frac{144}{169}} =$ <u><math>\frac{12}{13}</math></u>	g $\frac{\sqrt{49}}{\sqrt{36}} =$ <u><math>\frac{7}{6}</math></u>
d $\frac{\sqrt{36}}{9} =$ <u><math>\frac{6}{9} = \frac{2}{3}</math></u>	h $\frac{\sqrt{64}}{16} =$ <u><math>\frac{8}{16} = \frac{1}{2}</math></u>

**7** Bereken volgende vierkantswortels.

a $\sqrt{0,25} =$ <u>0,5</u>	e $-\sqrt{0,64} =$ <u>-0,8</u>
b $-\sqrt{0,01} =$ <u>-0,1</u>	f $-\sqrt{0,0049} =$ <u>-0,07</u>
c $\sqrt{0,0001} =$ <u>0,01</u>	g $\sqrt{\sqrt{16}} =$ <u><math>\sqrt{4} = 2</math></u>
d $-\sqrt{0,16} =$ <u>-0,4</u>	h $\sqrt{\sqrt{81}} =$ <u><math>\sqrt{9} = 3</math></u>



**8** Bereken met ICT.

a $\sqrt{15625} =$ <u>125</u>	c $\sqrt{677329} =$ <u>823</u>
b $\sqrt{1354,24} =$ <u>36,8</u>	d $\sqrt{10,3041} =$ <u>3,21</u>

**9** Tussen welke twee opeenvolgende natuurlijke getallen liggen volgende vierkantswortels?

Los dit op zonder ICT te gebruiken.

a <u>2</u> $< \sqrt{5} <$ <u>3</u>	e <u>9</u> $< \sqrt{96} <$ <u>10</u>
b <u>3</u> $< \sqrt{11} <$ <u>4</u>	f <u>20</u> $< \sqrt{403} <$ <u>21</u>
c <u>5</u> $< \sqrt{30} <$ <u>6</u>	g <u>11</u> $< \sqrt{140} <$ <u>12</u>
d <u>6</u> $< \sqrt{47} <$ <u>7</u>	h <u>999</u> $< \sqrt{999999} <$ <u>1000</u>

**10** a Welk getal hoort in het groene vlak te staan?



b Er zijn bij dit probleem twee oplossingen. Wat is de tweede oplossing? 3

11 Vul in met  $<$  of  $>$  of  $=$ .

a  $(0,01)^2$   $<$   $\left(\frac{1}{10}\right)^3$

||  
0,0001

||  
0,001

f  $(0,3)^3$   $<$   $(0,3)^2$

||  
0,027

||  
0,09

b  $\left(-\frac{1}{4}\right)^3$   $<$   $\left(\frac{1}{4}\right)^3$

||  
 $-\frac{1}{64}$

||  
 $\frac{1}{64}$

g  $\left(\frac{-11}{3}\right)^0$   $=$   $\left(\frac{-3}{11}\right)^0$

||  
1

||  
1

c  $(0,5)^2$   $>$   $(0,2)^5$

||  
0,25

||  
0,00032

h  $(1,1)^2$   $<$   $(1,1)^3$

||  
1,21

||  
1,331

d  $2^4$   $=$   $4^2$

||  
16

||  
16

i  $0^1$   $<$   $\left(\frac{1}{2}\right)^2$

||  
0

||  
 $\frac{1}{4}$

e  $(0,5)^2$   $>$   $\left(\frac{1}{5}\right)^2$

||  
0,25

||  
 $\frac{1}{25} = 0,04$

j  $\left(\frac{-3}{4}\right)^1$   $>$   $\left(\frac{-4}{3}\right)^1$

||  
 $-\frac{3}{4}$

||  
 $-\frac{4}{3}$