

# Meten is weten

## Antwoordenboek

**Opdracht 1**

$$1 \text{ cm} = 10 \text{ mm}$$

$$\frac{1}{2} \text{ cm} = 5 \text{ mm}$$

$$1\frac{1}{2} \text{ cm} = 15 \text{ mm}$$

$$6 \text{ cm} = 60 \text{ mm}$$

$$4 \text{ cm} = 40 \text{ mm}$$

$$4\frac{1}{2} \text{ cm} = 45 \text{ mm}$$

$$9\frac{1}{2} \text{ cm} = 95 \text{ mm}$$

$$10 \text{ cm} = 100 \text{ mm}$$

**Opdracht 2**

$$1 \text{ cm} = 10 \text{ mm}$$

$$1,5 \text{ cm} = 15 \text{ mm}$$

$$4,5 \text{ cm} = 45 \text{ mm}$$

$$3 \text{ cm} = 30 \text{ mm}$$

$$4 \text{ cm} = 40 \text{ mm}$$

$$6,5 \text{ cm} = 65 \text{ mm}$$

$$9,5 \text{ cm} = 95 \text{ mm}$$

$$7,5 \text{ cm} = 75 \text{ mm}$$

**Opdracht 3**

$$10 \times 12 = 120$$

$$10 \times 125 = 1250$$

$$10 \times 0,5 = 5$$

$$10 \times 139,78 = 1397,8$$

**Opdracht 4**

$$11 \text{ cm} = 110 \text{ mm}$$

$$13,5 \text{ cm} = 135 \text{ mm}$$

$$0,5 \text{ cm} = 5 \text{ mm}$$

$$15,5 \text{ cm} = 155 \text{ mm}$$

**Opdracht 5**

centimeter	millimeter
1	10
2,5	25
<b>4,5</b>	45
<b>10</b>	100
<b>15</b>	150

$$10 \text{ mm} = 1 \text{ cm}$$

$$20 \text{ mm} = 2 \text{ cm}$$

$$12,5 \text{ mm} = 1,25 \text{ cm}$$

$$300 \text{ mm} = 30 \text{ cm}$$

$$140 \text{ mm} = 14 \text{ cm}$$

$$14,5 \text{ mm} = 1,45 \text{ cm}$$

$$32 \text{ mm} = 3,2 \text{ cm}$$

$$1800 \text{ mm} = 180 \text{ cm}$$

**Opdracht 6**

decimeter	centimeter	millimeter		decimeter	centimeter	millimeter
1	10	<b>100</b>		1	10	100
2	20	<b>200</b>		2	20	<b>200</b>
10	<b>100</b>	<b>1000</b>		40	400	<b>4000</b>
25	<b>250</b>	<b>2500</b>		35	350	<b>3500</b>
1,5	<b>15</b>	<b>150</b>		2,5	25	<b>250</b>
3,75	<b>37,5</b>	<b>375</b>		3,15	31,5	315

decimeter	centimeter	millimeter
25	<b>250</b>	<b>2500</b>
<b>3,6</b>	36	<b>360</b>
<b>1,3</b>	<b>13</b>	130
<b>2,58</b>	25,8	<b>258</b>
0,8	<b>8</b>	<b>80</b>
<b>7,5</b>	<b>75</b>	750

**Opdracht 7**

decimeter	<b>dm</b>	centimeter	<b>cm</b>	millimeter	<b>mm</b>
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1 dm = <b>10</b> cm	10 cm = <b>100</b> mm	30 mm = <b>3</b> cm
3 dm = <b>30</b> cm	20 cm = <b>200</b> mm	25 mm = <b>2,5</b> cm
2 dm = <b>200</b> mm	30 cm = <b>3</b> dm	40 mm = <b>0,4</b> dm
5 dm = <b>500</b> mm	65 cm = <b>6,5</b> dm	14 mm = <b>0,14</b> dm

30 dm = <b>300</b> cm	120 cm = <b>1200</b> mm	300 mm = <b>30</b> cm
36 dm = <b>3600</b> mm	400 cm = <b>40</b> dm	150 mm = <b>1,5</b> dm
2,4 dm = <b>24</b> cm	4,5 cm = <b>45</b> mm	130,6 mm = <b>13,06</b> cm
8,4 dm = <b>840</b> mm	2,3 cm = <b>0,23</b> dm	125,6 mm = <b>1,256</b> dm

**Opdracht 8**

<b>m</b>	<b>dm</b>	<b>cm</b>	<b>mm</b>
1	10	100	1000
2,45	24,5	245	2450
<b>5</b>	<b>50</b>	500	<b>5000</b>
<b>3</b>	30	<b>300</b>	<b>3000</b>
<b>3,5</b>	<b>35</b>	<b>350</b>	3500
3,75	<b>37,5</b>	<b>375</b>	<b>3750</b>
<b>1,25</b>	<b>12,5</b>	125	<b>1250</b>

1 m = <b>100</b> cm
35 m = <b>350</b> dm
3,8 m = <b>3800</b> mm
12 m = <b>1200</b> cm
0,5 m = <b>5</b> dm
400 m = <b>4000</b> dm

230 cm = <b>2,3</b> m
400 cm = <b>40</b> dm
5000 mm = <b>5</b> m
34,8 dm = <b>3,48</b> m
257,9 mm = <b>2,579</b> dm
34,8 cm = <b>0,348</b> m

**Opdracht 9**

<b>dam</b>	<b>m</b>	<b>dm</b>	<b>cm</b>	<b>mm</b>
<b>1</b>	<b>10</b>	<b>100</b>	<b>1000</b>	<b>10.000</b>
2	<b>20</b>	<b>200</b>	<b>2000</b>	<b>20.000</b>
<b>3</b>	30	<b>300</b>	<b>3000</b>	<b>30.000</b>
<b>0,45</b>	<b>4,5</b>	45	<b>450</b>	<b>4500</b>
<b>0,475</b>	<b>4,75</b>	<b>47,5</b>	475	<b>4750</b>
<b>1,256</b>	<b>12,56</b>	<b>125,6</b>	<b>1256</b>	12.560
<b>0,357</b>	<b>3,57</b>	35,7	<b>357</b>	<b>3570</b>
<b>0,01</b>	0,1	<b>1</b>	<b>10</b>	<b>100</b>

1 dam = <b>1000</b> cm
35 dam = <b>350</b> m
4,8 dam = <b>480</b> dm
12 dam = <b>12.000</b> cm
0,5 dam = <b>5</b> m
310 dam = <b>31.000</b> dm

500 cm = <b>5</b> m
435 m = <b>43,5</b> dam
6000 mm = <b>0,6</b> dam
46 dm = <b>4,6</b> m
1000 m = <b>100</b> dam
378 cm = <b>3,78</b> m

### Opdracht 10

hm	dam	m	dm	cm	mm
<b>1</b>	<b>10</b>	<b>100</b>	<b>1000</b>	<b>10.000</b>	<b>100.000</b>
10	<b>100</b>	<b>1000</b>	<b>10.000</b>	<b>100.000</b>	<b>1.000.000</b>
<b>2,5</b>	25	<b>250</b>	<b>2500</b>	<b>25.000</b>	<b>250.000</b>
<b>4,5</b>	<b>45</b>	450	<b>4500</b>	<b>45.000</b>	<b>450.000</b>
<b>0,375</b>	<b>3,75</b>	<b>37,5</b>	375	<b>3750</b>	<b>37.500</b>
<b>0,4</b>	<b>4</b>	<b>40</b>	<b>400</b>	4.000	<b>40.000</b>
<b>0,5</b>	<b>5</b>	<b>50</b>	<b>500</b>	<b>5000</b>	50.000

1	hm	=	<b>10.000</b>	cm
53	hm	=	<b>5300</b>	m
4,8	dam	=	<b>0,48</b>	hm
12	hm	=	<b>1200</b>	cm
3	dam	=	<b>0,3</b>	hm

500	cm	=	<b>0,05</b>	hm
5200	cm	=	<b>5,2</b>	dam
3000	m	=	<b>30</b>	hm
460	dm	=	<b>0,46</b>	hm
30.000	m	=	<b>300</b>	hm

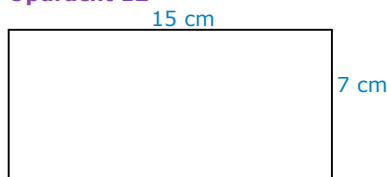
### Opdracht 11

km	hm	dam	m	dm	cm	mm
<b>1</b>	<b>10</b>	<b>100</b>	<b>1000</b>	<b>10.000</b>	<b>100.000</b>	<b>1.000.000</b>
5	<b>50</b>	<b>500</b>	<b>5000</b>	<b>50.000</b>	<b>500.000</b>	<b>5.000.000</b>
<b>6</b>	60	<b>600</b>	<b>6000</b>	<b>60.000</b>	<b>600.000</b>	<b>6.000.000</b>
<b>7</b>	<b>70</b>	700	<b>7000</b>	<b>70.000</b>	<b>700.000</b>	<b>7.000.000</b>
<b>0,05</b>	<b>0,5</b>	<b>5</b>	50	<b>500</b>	<b>5000</b>	<b>50.000</b>
<b>0,7</b>	<b>7</b>	<b>70</b>	<b>700</b>	7000	<b>70.000</b>	<b>700.000</b>
<b>0,65</b>	<b>6,5</b>	<b>65</b>	<b>650</b>	<b>6500</b>	65.000	<b>650.000</b>
<b>0,12</b>	<b>1,2</b>	<b>12</b>	<b>120</b>	<b>1200</b>	<b>12.000</b>	120.000

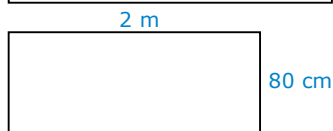
1	km	=	<b>10</b>	hm
3	hm	=	<b>3000</b>	m
5,8	dam	=	<b>0,058</b>	km
120	hm	=	<b>12</b>	km
12,5	dam	=	<b>12.500</b>	hm

50.000	cm	=	<b>0,5</b>	km
4100	dm	=	<b>0,41</b>	km
3500	m	=	<b>3,5</b>	km
510	dm	=	<b>5,1</b>	dam
80.000	mm	=	<b>0,08</b>	km

### Opdracht 12



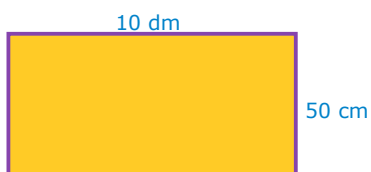
$$\text{Omtrek} = 15 \text{ cm} + 7 \text{ cm} + 15 \text{ cm} + 7 \text{ cm} = \mathbf{44 \text{ cm}}$$



$$\text{Omtrek} = 2 \times 200 \text{ cm} + 2 \times 80 \text{ cm} = 400 \text{ cm} + 160 \text{ cm} = \mathbf{560 \text{ cm} = 5,6 \text{ m}}$$

$$\text{Omtrek} = 2 \times 2 \text{ m} + 2 \times 0,8 \text{ m} = 4 \text{ m} + 1,6 \text{ m} = \mathbf{5,6 \text{ m} = 560 \text{ cm}}$$

**Tuin:**  $15 \text{ m} + 3 \text{ m} + 6 \text{ m} + 4 \text{ m} + 9 \text{ m} + 7 \text{ m} = \mathbf{44 \text{ m}}$



De omtrek **300 cm**.

Je kunt ook zeggen: De omtrek is **30 dm**.

### Opdracht 13

2 x breedte = 2 x 4 cm = 8 cm. Er blijft 20 cm - 8 cm = 12 cm over voor 2 x lengte.

De lengte is dus:

12 cm : 2 = **6 cm**

breedte 4 cm



lengte		breedte		omtrek	
<b>6</b>	cm	4	cm	20	cm
<b>18</b>	cm	6	cm	48	cm
12	m	<b>5</b>	m	34	m
15	dm	10	dm	<b>50</b>	dm
80	dm	6	m	<b>28</b>	m
25	cm	<b>1</b>	dm	70	cm
250	m	2	hm	<b>900</b>	m
<b>15</b>	m	50	dm	40	m
12	m	<b>5</b>	m	34	m
<b>5</b>	m	50	dm	20	m

### Opdracht 14

km <sup>2</sup>	hm <sup>2</sup>	dam <sup>2</sup>	m <sup>2</sup>	dm <sup>2</sup>	cm <sup>2</sup>	mm <sup>2</sup>
	<b>ha</b>	<b>a</b>	<b>ca</b>			
		<b>0,5</b>	<b>50</b>	<b>5000</b>		
				<b>0,65</b>	<b>65</b>	<b>6500</b>
	<b>0,001</b>	<b>0,1</b>	<b>10</b>			
			<b>0,0302</b>	<b>3,02</b>	<b>302</b>	
<b>0,04</b>	<b>4</b>	<b>400</b>				
	<b>0,05</b>	<b>5</b>	<b>500</b>	<b>50.000</b>		
		<b>0,03</b>	<b>3</b>	<b>300</b>	<b>30.000</b>	

### Opdracht 15

1	km <sup>2</sup>	=	<b>100</b>	hm <sup>2</sup>
40	dm <sup>2</sup>	=	<b>4000</b>	cm <sup>2</sup>
6	hm <sup>2</sup>	=	<b>60.000</b>	m <sup>2</sup>
200	dm <sup>2</sup>	=	<b>0,02</b>	dam <sup>2</sup>
300	dam <sup>2</sup>	=	<b>3</b>	hm <sup>2</sup>

50.000	dm <sup>2</sup>	=	<b>5</b>	dam <sup>2</sup>
4100	dam <sup>2</sup>	=	<b>0,41</b>	km <sup>2</sup>
3500	dam <sup>2</sup>	=	<b>35</b>	hm <sup>2</sup>
510	dm <sup>2</sup>	=	<b>0,051</b>	dam <sup>2</sup>
80.000	mm <sup>2</sup>	=	<b>0,08</b>	m <sup>2</sup>

### Opdracht 16

3	ha	=	<b>3</b>	hm <sup>2</sup>
53	are	=	<b>0,53</b>	hm <sup>2</sup>
3000	ca	=	<b>0,3</b>	hm <sup>2</sup>
120	hm <sup>2</sup>	=	<b>12.000</b>	are
300	are	=	<b>30.000</b>	m <sup>2</sup>

5,2	ha	=	<b>52.000</b>	m <sup>2</sup>
41,3	ha	=	<b>413.000</b>	m <sup>2</sup>
350.000	m <sup>2</sup>	=	<b>35</b>	ha
510	m <sup>2</sup>	=	<b>5,1</b>	are
80.000	ca	=	<b>8</b>	hm <sup>2</sup>

Opdracht 17 Welke oppervlakte is het grootst? **40 hm<sup>2</sup>**

km <sup>2</sup>	hm <sup>2</sup>	dam <sup>2</sup>	m <sup>2</sup>	dm <sup>2</sup>	cm <sup>2</sup>	mm <sup>2</sup>
	<b>ha</b>	<b>a</b>	<b>ca</b>			
		<b>350</b> →	<b>35.000</b>			
			<b>3000</b>			
	<b>40</b> →		<b>400.000</b>			

Welke oppervlakte is het grootst? **1 km<sup>2</sup>**

km <sup>2</sup>	hm <sup>2</sup>	dam <sup>2</sup>	m <sup>2</sup>	dm <sup>2</sup>	cm <sup>2</sup>	mm <sup>2</sup>
			<b>1</b> ←	<b>10.000</b>		
	<b>10</b> →		<b>100.000</b>			
<b>1</b> →			<b>1.000.000</b>			

**Opdracht 18**

$3 \text{ m} \times 2 \text{ m} = 6 \text{ m}^2 \quad 6 \text{ cm} \times 4 \text{ cm} = 24 \text{ cm}^2 \quad 5 \text{ cm} \times 3 \text{ cm} = 15 \text{ cm}^2 \quad 5 \text{ hm} \times 2 \text{ hm} = 10 \text{ ha}$

**Opdracht 19**

lengte		breedte		oppervlakte	
10	m	8	m	$10 \text{ m} \times 8 \text{ m} = 80$	$\text{m}^2$
6	cm	3	cm	$6 \text{ cm} \times 3 \text{ cm} = 18$	$\text{cm}^2$
4	km	3	km	$4 \text{ km} \times 3 \text{ km} = 12$	$\text{km}^2$
11	dam	8	dam	$11 \text{ dam} \times 8 \text{ dam} = 88$	are
20	dm	3	dm	$20 \text{ dm} \times 3 \text{ dm} = 60$	$\text{dm}^2$

**Opdracht 20**

lengte		breedte		oppervlakte	
8	m	15	cm	$8 \text{ m} \times 0,15 \text{ m} = 1,2$	$\text{m}^2$
6	dam	3	dam	$60 \text{ m} \times 30 \text{ m} = 1800$	$\text{m}^2$
4	km	10	hm	$4000 \text{ m} \times 1000 \text{ m} = 4.000.000$	$\text{m}^2$
2	dam	20	dm	$20 \text{ m} \times 2 \text{ m} = 40$	$\text{m}^2$
20	dm	3	dm	$2 \text{ m} \times 3 \text{ m} = 6$	$\text{m}^2$
3	m	12	dm	$3 \text{ m} \times 1,2 \text{ m} = 3,6$	$\text{m}^2$
6	dam	20	m	$60 \text{ m} \times 20 \text{ m} = 1200$	$\text{m}^2$

**Opdracht 21**

lengte	breedte	omtrek $2 \times l + 2 \times b$			oppervlakte $l \times b$		
5 m	4 m	$10 \text{ m} + 8 \text{ m}$	<b>18</b>	m	$5 \text{ m} \times 4 \text{ m}$	<b>20</b>	$\text{m}^2$
10 m	5 m	$20 \text{ m} + 10 \text{ m}$	<b>30</b>	m	$10 \text{ m} \times 5 \text{ m}$	<b>50</b>	$\text{m}^2$
3 dm	2 dm	$6 \text{ dm} + 4 \text{ dm}$	<b>10</b>	dm	$3 \text{ dm} \times 2 \text{ dm}$	<b>6</b>	$\text{dm}^2$
40 hm	10 hm	$80 \text{ hm} + 20 \text{ hm}$	<b>100</b>	hm	$40 \text{ hm} \times 10 \text{ hm}$	<b>400</b>	$\text{hm}^2$
25 dam	20 dam	$50 \text{ dam} + 40 \text{ dam}$	<b>90</b>	dam	$25 \text{ dam} \times 20 \text{ dam}$	<b>500</b>	$\text{dam}^2$
50 km	12 km	$10 \text{ km} + 24 \text{ km}$	<b>124</b>	km	$50 \text{ km} \times 12 \text{ km}$	<b>600</b>	$\text{km}^2$

**Opdracht 22**

De oppervlakte is  $16 \text{ m}^2 + 6 \text{ m}^2 = 22 \text{ m}^2$

De omtrek =  $2 \times 6 \text{ m} + 2 \times 4 \text{ m} = 20 \text{ m}$

**Opdracht 23** Reken de omtrek en de oppervlakte uit.

De oppervlakte is  $21 \text{ m}^2 + 12 \text{ m}^2 + 5 \text{ m}^2 = 38 \text{ m}^2$

De omtrek =  $2 \times 11 \text{ m} + 2 \times 4 \text{ m} = 30 \text{ m}$

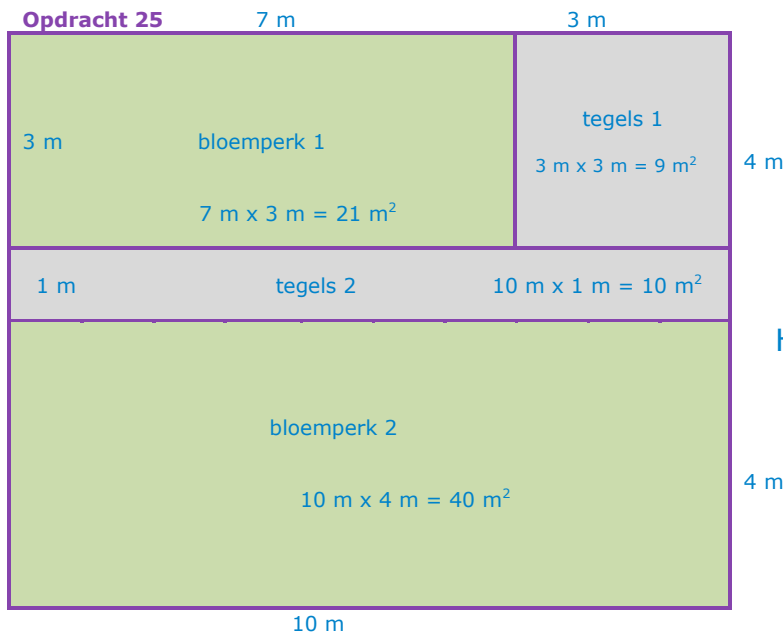
Vul de tabel in.

gras
bloemen
hele tuin (let op!)

	omtrek	oppervlakte
	$2 \times 7 \text{ m} + 2 \times 4 \text{ m} = \mathbf{22 \text{ m}}$	$3 \text{ m} \times 7 \text{ m} + 1 \text{ m} \times 5 \text{ m} = \mathbf{26 \text{ m}^2}$
	$2 \times 4 \text{ m} + 2 \times 3 \text{ m} = \mathbf{14 \text{ m}}$	$3 \text{ m} \times 4 \text{ m} = \mathbf{12 \text{ m}^2}$
	$2 \times 11 \text{ m} + 2 \times 4 \text{ m} = \mathbf{30 \text{ m}}$	<b>samen: <math>38 \text{ m}^2</math></b>

**Opdracht 24**
 $80 \text{ cm} = 8 \text{ dm} = 0,8 \text{ m}$ 

 De oppervlakte =  $0,8 \text{ m} \times 0,8 \text{ m} = \mathbf{0,64 \text{ m}^2}$ 

 De omtrek =  $4 \times 0,8 \text{ m} = \mathbf{3,2 \text{ m}}$ 


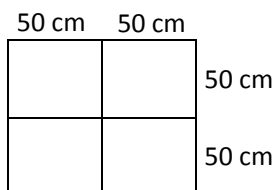
Er moet een tegelpad  
aangelegd worden.  
De tegels zijn  $50 \times 50 \text{ cm}$ .

Hoeveel tegels zijn er nodig?

**76 tegels.**

Oppervlakte van bloemperk 1 =  $7 \text{ m} \times 3 \text{ m} = 21 \text{ m}^2$   
 Oppervlakte van bloemperk 2 =  $10 \text{ m} \times 4 \text{ m} = 40 \text{ m}^2$   
 De totale oppervlakte van het bloemperk is  **$61 \text{ m}^2$**

Oppervlakte van tegels 1 =  $3 \text{ m} \times 3 \text{ m} = 9 \text{ m}^2$   
 Oppervlakte van tegels 2 =  $10 \text{ m} \times 1 \text{ m} = 10 \text{ m}^2$   
 De totale oppervlakte van de tegels is  **$19 \text{ m}^2$**

 De tegel is  $50 \text{ cm} \times 50 \text{ cm}$ . Er passen **4** tegels in één vierkante meter.


Er zijn 19 vierkante meters.  
 Er zijn dus nodig  **$19 \times 4 = 76$**  tegels.

Of:

In vak tegels 1 passen 6 rijen van 6 tegels = 36 tegels.  
 In vak tegels 2 passen 20 rijen van 2 tegels = 40 tegels.  
 Samen:  $36 + 40 = \mathbf{76}$  tegels.




**Opdracht 26**

km <sup>3</sup>	hm <sup>3</sup>	dam <sup>3</sup>	m <sup>3</sup>	dm <sup>3</sup>	cm <sup>3</sup>	mm <sup>3</sup>
			<b>0,001</b>	<b>1</b>	<b>1000</b>	
			<b>1</b>	<b>1000</b>	<b>1.000.000</b>	
			<b>0,025</b>	<b>25</b>	<b>25.000</b>	
			<b>0,002</b>	<b>2</b>	<b>2000</b>	

**Opdracht 27**

1 m <sup>3</sup> = <b>1000</b> dm <sup>3</sup>	5000 cm <sup>3</sup> = <b>5</b> dm <sup>3</sup>
1 dm <sup>3</sup> = <b>1000</b> cm <sup>3</sup>	410 dm <sup>3</sup> = <b>0,41</b> m <sup>3</sup>
1 m <sup>3</sup> = <b>1.000.000</b> cm <sup>3</sup>	25.000 cm <sup>3</sup> = <b>0,025</b> m <sup>3</sup>
12 dm <sup>3</sup> = <b>12.000</b> cm <sup>3</sup>	1510 dm <sup>3</sup> = <b>1,51</b> m <sup>3</sup>

**Opdracht 28**

	lengte: 80 cm breedte: 30 cm hoogte: 50 cm	80 cm x 30 cm x 50 cm = <b>120.000</b> cm <sup>3</sup>
	lengte: 5 dm breedte: 3 dm hoogte: 4 dm	5 dm x 3 dm x 4 dm = <b>60</b> dm <sup>3</sup>
	lengte: 8 m breedte: 4 m hoogte: 2,5 m	8 m x 4 m x 2,5 m = <b>80</b> m <sup>3</sup>

**Opdracht 29**

km <sup>3</sup>	hm <sup>3</sup>	dam <sup>3</sup>	m <sup>3</sup>	dm <sup>3</sup>	cm <sup>3</sup>	mm <sup>3</sup>
			<b>0,001</b>	<b>1</b>	<b>1000</b>	
			<b>1</b>	<b>1000</b>	<b>1.000.000</b>	
			<b>0,025</b>	<b>25</b>	<b>25.000</b>	
			<b>0,002</b>	<b>2</b>	<b>2000</b>	

**Opdracht 30**

3 m <sup>3</sup> = <b>3000</b> dm <sup>3</sup>	500 cm <sup>3</sup> = <b>0,5</b> dm <sup>3</sup>
15 dm <sup>3</sup> = <b>15.000</b> cm <sup>3</sup>	41 dm <sup>3</sup> = <b>0,041</b> m <sup>3</sup>
4 m <sup>3</sup> = <b>4.000.000</b> cm <sup>3</sup>	50.000 cm <sup>3</sup> = <b>0,05</b> m <sup>3</sup>
1 dm <sup>3</sup> = <b>1000</b> cm <sup>3</sup>	600 dm <sup>3</sup> = <b>0,6</b> m <sup>3</sup>
1 cm <sup>3</sup> = <b>1000</b> mm <sup>3</sup>	2000 mm <sup>3</sup> = <b>2</b> cm <sup>3</sup>

**Opdracht 31**

lengte	breedte	hoogte	inhoud
150 cm	20 dm	0,3 m	
<b>1,5 m</b>	<b>2 m</b>	<b>0,3 m</b>	1,5 m x 2 m x 0,3 m =
			3 x 0,3 = <b>0,9</b> m <sup>3</sup>
lengte	breedte	hoogte	inhoud
120 mm	5 cm	0,3 m	
<b>12 cm</b>	<b>5 cm</b>	<b>30 cm</b>	12 cm x 5 cm x 30 cm =
			60 x 30 = <b>1800</b> cm <sup>3</sup>

lengte		breedte		hoogte		inhoud		
2	m	1	m	50	cm	2 m x 1 m x 0,5 m =	<b>1</b>	m <sup>3</sup>
40	cm	2	dm	10	cm	0,4 m x 0,2 m x 0,1 m =	<b>0,008</b>	m <sup>3</sup>
1	dam	5	m	2	m	0,1 m x 5 m x 2 m =	<b>1</b>	m <sup>3</sup>
3,5	m	200	cm	5	dm	3,5 m x 2 m x 0,5 m =	<b>3,5</b>	m <sup>3</sup>
1,5	m	1	m	5	dm	1,5 m x 1 m x 0,5 m =	<b>0,75</b>	m <sup>3</sup>
8	dm	50	cm	3	dm	0,8 m x 0,5 m x 0,3 m =	<b>0,12</b>	m <sup>3</sup>

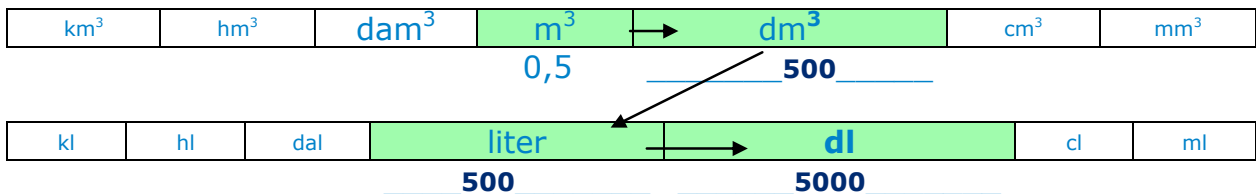
### Opracht 32

kl	hl	dal	liter	dl	cl	ml
<b>0,1</b>	<b>1</b>	<b>10</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>1000</b>
	<b>0,2</b>	<b>2</b>	<b>20</b>			
		<b>0,35</b>	<b>3,5</b>	<b>35</b>	<b>350</b>	<b>3500</b>
<b>0,05</b>	<b>0,5</b>	<b>5</b>	<b>50</b>			
			<b>1,5</b>	<b>15</b>	<b>150</b>	<b>1500</b>
			<b>2,05</b>	<b>20,5</b>	<b>205</b>	<b>2050</b>

### Opracht 33

3	l	=	<b>30</b>	dl		5,2	hl	=	<b>520</b>	l
53	hl	=	<b>5300</b>	l		41,3	dal	=	<b>413</b>	l
3000	cl	=	<b>30</b>	l		350.000	ml	=	<b>350</b>	l
120	ml	=	<b>12</b>	cl		510	cl	=	<b>5,1</b>	l
300	dl	=	<b>3</b>	dal		80.000	ml	=	<b>800</b>	dl
3,5	kl	=	<b>3500</b>	l		33.000	cl	=	<b>33</b>	dal
4,5	kl	=	<b>4500</b>	l		45	ml	=	<b>4,5</b>	cl
0,8	hl	=	<b>80</b>	l		90	cl	=	<b>0,9</b>	l
35	dal	=	<b>350</b>	l		247	ml	=	<b>24,7</b>	cl
380	dl	=	<b>38</b>	l		265	cl	=	<b>2,65</b>	l
320	cl	=	<b>3,2</b>	l		25.000	ml	=	<b>25</b>	l
2300	ml	=	<b>2,3</b>	l		44.450	ml	=	<b>0,04445</b>	kl

### Opracht 34



### Opracht 35

5	m <sup>3</sup>	=	<b>5000</b>	l
10	l	=	<b>10.000</b>	cm <sup>3</sup>
5	kl	=	<b>5000</b>	dm <sup>3</sup>
1	dm <sup>3</sup>	=	<b>100</b>	cl
120	cm <sup>3</sup>	=	<b>1,2</b>	dl

100	cm <sup>3</sup>	=	<b>100</b>	ml
41	l	=	<b>0,041</b>	m <sup>3</sup>
20.000	cm <sup>3</sup>	=	<b>20</b>	l
600	l	=	<b>0,6</b>	m <sup>3</sup>
2000	ml	=	<b>2</b>	dm <sup>3</sup>



**Opdracht 36**

 We rekenen eerst uit hoeveel  $m^3$  in dit zwembad gaan.

$$12 \text{ m} \times 5 \text{ m} \times 1,20 \text{ m} = 12 \times 6 = \mathbf{72 \text{ m}^3}$$

$km^3$	$hm^3$	$dam^3$	$m^3$	$dm^3$	$cm^3$	$mm^3$
			<b>72</b>	<b>72.000</b>		
				liter		

**Opdracht 37**

km	hm	dam	m	dm	cm	mm
				1,5	15	
					8	
					5	50

 De inhoud is  $15 \text{ cm} \times 8 \text{ cm} \times 5 \text{ cm} = \mathbf{600 \text{ cm}^3} = \mathbf{0,6 \text{ dm}^3} = \mathbf{0,6 \text{ liter}}$ .

**Opdracht 38**

kg	hg	dag	g	dg	cg	mg
<b>1</b>	<b>10</b>	<b>100</b>	<b>1000</b>	<b>10.000</b>		
<b>1,004</b>	<b>10,04</b>	<b>100,4</b>	<b>1004</b>	<b>10.040</b>	<b>100.400</b>	
<b>1,506</b>	<b>15,06</b>	<b>150,6</b>	<b>1506</b>			
	<b>0,04</b>	<b>0,4</b>	<b>4</b>	<b>40</b>		
	<b>8,5</b>	<b>85</b>	<b>850</b>	<b>8500</b>	<b>85.000</b>	
			<b>6,1</b>	<b>61</b>	<b>610</b>	<b>6100</b>
				<b>30</b>	<b>300</b>	<b>3000</b>
				<b>15</b>	<b>150</b>	<b>1500</b>

**Opdracht 39**

2,5	kg	=	<b>2500</b>	g
3	hg	=	<b>300</b>	g
1,2	kg	=	<b>1200</b>	g
15	dg	=	<b>1,5</b>	g
120	cg	=	<b>1,2</b>	g
25	kg	=	<b>25.000</b>	g

23	dg	=	<b>2300</b>	mg
150	mg	=	<b>15</b>	cg
125	mg	=	<b>0,125</b>	g
0,2	g	=	<b>20</b>	cg
0,5	g	=	<b>500</b>	mg
3500	g	=	<b>3,5</b>	mg

**Opdracht 40**

1	ton	=	<b>1000</b>	kg
3	ton	=	<b>3000</b>	kg
3,5	ton	=	<b>3500</b>	kg
20	ton	=	<b>20.000</b>	kg

4,5	ton	=	<b>4500</b>	kg
0,5	ton	=	<b>500</b>	kg
1,2	ton	=	<b>1200</b>	kg
35	ton	=	<b>35.000</b>	kg

 2 ton = **€ 200.000,-**

Ik heb 2,5 ton gewonnen in de loterij!

 Dan bedoelen ze **€ 250.000,-**

**Toetsopgaven**

De antwoorden op een rij:

1. C	16. D	31. A	46. C	61. D
2. A	17. B	32. B	47. B	62. C
3. B	18. D	33. C	48. D	63. B
4. B	19. D	34. C	49. C	64. B
5. B	20. C	35. C	50. B	65. A
6. D	21. D	36. C	51. B	66. C
7. C	22. B	37. B	52. D	67. C
8. C	23. A	38. C	53. A	68. C
9. B	24. C	39. B	54. B	69. C
10. B	25. D	40. B	55. B	70. C
11. D	26. D	41. C	56. D	71. B
12. B	27. C	42. C	57. C	72. A
13. C	28. A	43. C	58. B	73. D
14. C	29. B	44. C	59. C	
15. B	30. C	45. D	60. B	

De antwoorden met uitleg:

**Opgave 1** **C 500 gram**

1 kilo = 1000 gram

**Opgave 2** **A 250 m<sup>2</sup>**

 opp. = lengte x breedte  
 opp. = 25 m x 10 m

**Opgave 3** **B 0,8 kilo**

800 gram = 0,800 kg

**Opgave 4** **B 375 g**

1000 x 0,375

**Opgave 5** **B 5300 m**

1000 x 5,3

**Opgave 6** **D 200 porties**

 1 dam<sup>2</sup> = 100 m<sup>2</sup>

		x 2		x 100
<b>porties</b>	1		2	<b>200</b>
<b>m<sup>2</sup></b>	0,5 m <sup>2</sup>		1 m <sup>2</sup>	100 m <sup>2</sup>
		x 2		x 100

**Opgave 7** **C 5 blikken**

 opp. = lengte x breedte  
 opp. = 11 m x 3 m = 33 m<sup>2</sup>

		x 4
<b>blikken</b>	1	4
<b>m<sup>2</sup></b>	8 m <sup>2</sup>	32 m <sup>2</sup>
		x 4

4 blikken is net te weinig.

**Opgave 8** **C 0,5 liter**

1 l = 100 cl

**Opgave 9** **B 200 gram**

3,975 g = ± 4 kg

	: 2		: 10
<b>boekjes</b>	20	10	1
<b>gram</b>	± 4 kg = 4000g	± 2000 g	± <b>200 g</b>
	: 2		: 10

**Opgave 10** **B € 22,50**

100 g	1000 g	500 g	1,5 kg = 1500 g
€ 1,50	€ 15,00	€ 7,50	<b>€ 22,50</b>

**Opgave 11** **D 8250 m<sup>2</sup>**

 opp. = lengte x breedte  
 opp. = 110 m x 75 m

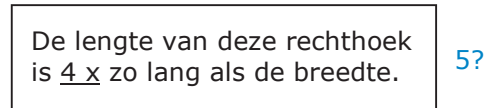
**Opgave 12** **B 0,4 cm**

10 mm = 1 cm

**Opgave 13** **C 2500 cm<sup>3</sup>**

 1 l = 1 dm<sup>3</sup> = 1000 cm<sup>3</sup>
**Opgave 14** **C hm**

2 km = 20 hm



4 x 5 = 20    2 km = 20 hm

**Opgave 15** **B 750 gram**


1 kg = 1000 g    0,75 x 1000

**Opgave 16** **D € 10,00**

	x 5
195 g = ± 200 g	1000 g = 1 kilo
€ 1,98 = ± € 2,00	<b>€ 10,00</b>
	x 5

**Opgave 17** **B € 1,70**

	: 10		x 2
1 kilo = 1000 g	100 g	200 g	
€ 8,50	€ 0,85	<b>€ 1,70</b>	
	: 10		x 2

**Opgave 18**
**D 24 blikjes**

opp. = lengte x breedte  
 opp. = 20 m x 12 m = 240 m<sup>2</sup>

		x 24	
<b>blikjes</b>	1		<b>24</b>
<b>m<sup>2</sup></b>	10 m <sup>2</sup>		240 m <sup>2</sup>
		x 24	

**Opgave 19**
**D 3 m<sup>3</sup>**

inh. = lengte x breedte x hoogte =  
 inh. = 4 m x 3 m x 25 cm (je vult tot de helft!)  
 inh. = 4 m x 3 m x 0,25 m

**Opgave 20**
**C 2 hm**

Van **23,7** (23 km en 7 hm) naar  
**23,9** (23 km en 9 hm)

**Opgave 21**
**D 3135 gram**

Meer dan 3 kg.

**Opgave 22**
**B 2,5 kilo**

1000 g = 1 kg  
 2495 gram = ± 2500 gram    2500 : 1000

**Opgave 23**
**A 12 m<sup>2</sup>**

opp. = lengte x breedte =  
 opp. = 6 m x 2 m

**Opgave 24**
**C 32 cm**

9 cm + 7 cm + 6 cm + 3 cm + 3 cm + 4 cm  
 Of: 2 x 9 cm + 2 x 7 cm

**Opgave 25**
**D 54 cm<sup>2</sup>**

Maak 2 rechthoeken. Dan doe je:  
 7 cm x 6 cm = 42 cm<sup>2</sup> en  
 4 cm x 3 cm = 12 cm<sup>2</sup>  
 42 cm<sup>2</sup> + 12 cm<sup>2</sup>

**Opgave 26**
**D 940 cm**

1000 cm - 60 cm

**Opgave 27**
**C 20 blokjes**

		x 10	
<b>ml</b>	250 ml		2,5 l = 2500 ml
<b>blokjes</b>	2		<b>20</b>
		x 10	

**Opgave 28**
**A 0,3 m<sup>3</sup>**

inh. = lengte x breedte x hoogte  
 inh. = 1,2 m x 0,5 m x 0,5 m

**Opgave 29**
**B 240 balen**

Bodem = 3,60 m breed, 8 m lang  
 Strobaal = 1,2 m lang, 0,5 m breed  
 Dwars in de breedte:  
**3** naast elkaar (3 x 1,2 m = 3,6 m)  
 In de lengte:  
**16** van die rijen van 3 ( (16 x 0,5 m = 8 m)  
 Dus: 3 x 16 balen = **48** balen op de bodem  
 Laadruimte = 250 cm hoog  
 Strobaal = 5 dm (of 50 cm) hoog  
 Dus: **5** lagen strobalen op elkaar  
 (5 x 50 cm = 250 cm)  
 5 lagen van 48 balen = 5 x 48 balen

**Opgave 30**
**C 60 blikjes**

Op de bodem:  
 5 rijen van 4 blikjes = 20 blikjes  
 De doos is 3 dm = 30 cm hoog.  
 3 lagen van 20 blikjes op elkaar

**Opgave 31**
**A 350 liter**

1 hl = 100 l    3,5 x 100

**Opgave 32**
**B 40 panelen**

8 panelen in de lengte (8 x 1,50 m = 12 m)  
 5 in de hoogte (5 x 80 cm = 400 cm = 4 m)  
 Dus: 8 x 5 panelen

**Opgave 33**
**C 3,24 m<sup>2</sup>**

opp. = lengte x breedte  
 opp. = 1,8 m x 1,8 m

**Opgave 34**
**C 600 planken**

omtr. = 2 x lengte + 2 x breedte  
 omtr. = 60 m + 30 m = 90 m = 9000 cm  
 9000 : 15

**Opgave 35**
**C 30 touwen**

		x 3	x 10	
<b>touwen</b>	1		3	<b>30</b>
<b>cm</b>	250 cm		750 cm	75 m = 7500 cm
		x 3	x 10	

**Opgave 36**
**C (100 ml = 1 dl)**

1 l = 10 dl = 100 cl = 1000 ml  
 ½ l = 500 ml (pijl A)  
 pijl C: 100 ml = 1 dl

**Opgave 37** **B 40 flesjes**

<b>flesjes</b>	1	4	<b>40</b>
<b>ml</b>	25 ml	100 ml	1 l = 1000 ml
	<small>x 4</small>	<small>x 10</small>	
	<small>x 4</small>	<small>x 10</small>	

**Opgave 38** **C 5 dl**

1 l = 10 dl

<b>3 sinaasappels</b>	<b>6 sinaasappels</b>
<small>x 2</small>	
1 glas = ¼ l	2 glazen = ½ l = <b>5 dl</b>
<small>x 2</small>	

**Opgave 39** **B 2,4 m<sup>3</sup>**

inh. = lengte x breedte x hoogte

inh. = 6 m x 4 m x 10 cm

inh. = 6 m x 4 m x 0,1 m

**Opgave 40** **B 5 dm<sup>3</sup>**

 1 l = 1 dm<sup>3</sup> = 10 dl

 50 dl = 5 l = 5 dm<sup>3</sup>
**Opgave 41** **C 4 pakken**

1 l = 100 cl

<b>pannenkoeken</b>	20	160	
<b>cl</b>	50 cl	400 cl = <b>4 l</b>	
	<small>x 8</small>	<small>x 8</small>	
	<small>x 8</small>	<small>x 8</small>	

**Opgave 42** **C 100 cm<sup>2</sup>**
**Opgave 43** **C 1,1 dm<sup>3</sup>**

 1 l = 1 dm<sup>3</sup>

10 dl + 10 cl =

 1 l + 0,1 l = 1,1 l = 1,1 dm<sup>3</sup>
**Opgave 44** **C 6 liter**

 3 x 4 m<sup>2</sup> = 12 m<sup>2</sup>

 2 x 12 m<sup>2</sup> = 24 m<sup>2</sup>

24 x ¼ l verf

**Opgave 45** **D 200 pillen**

1 kg = 1000 g    0,3 kg = 300 g

<b>pillen</b>	1	10	<b>200</b>
<b>gram</b>	1,5 g	15 g	300 g
	<small>x 10</small>	<small>x 20</small>	
	<small>x 10</small>	<small>x 20</small>	

**Opgave 46** **C 6 dm<sup>2</sup>**

 6 vlakken van 1 dm<sup>2</sup>
**Opgave 47** **B 20 cm<sup>2</sup>**

omtr. = 2 x lengte + 2 x breedte

18 cm = 10 cm + 8 cm (2 x breedte)

breedte = 4 cm

opp. = lengte x breedte = 5 cm x 4 cm

**Opgave 48** **D € 2,00**

<small>: 7</small>	<small>x 10</small>	
700 g	100 g	1000 g = 1 kilo
€ 1,40	€ 0,20	<b>€ 2,00</b>
<small>: 7</small>	<small>x 10</small>	

**Opgave 49** **C € 2,76**

<small>: 10</small>	<small>x 2</small>	
1 kg = 1000 g	100 g	200 g
€ 12,00	€ 1,20	€ 2,40
<small>: 10</small>	<small>x 2</small>	

<small>: 100</small>	<small>x 3</small>	
1 kg = 1000 g	10 g	30 g
€ 12,00	€ 0,12	€ 0,36
<small>: 100</small>	<small>x 3</small>	

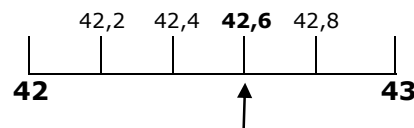
€ 2,40 + € 0,36

**Opgave 50** **B 0,8 m**

10 dm = 1 m    8 potloden = 8 dm    8 : 10

**Opgave 51** **B 1,35 ton**

1 ton = 1000 kilo    1350 : 1000

**Opgave 52** **D 42 kg + 600 g**


42,6 kg = 42 kg en 600 g

**Opgave 53** **A 5 cm**

omtr. = 2 x lengte + 2 x breedte

30 cm = 20 cm + 2 x breedte

2 x breedte = 10 cm

**Opgave 54** **B 200 m<sup>2</sup>**

 2 are = 2 dam<sup>2</sup> = 2 x 100 m<sup>2</sup>
**Opgave 55** **B 300 gram**

1 kg = 1000 g    0,3 x 1000

**Opgave 56** **D 180 m**

opp. = lengte x breedte

 2000 m<sup>2</sup> = 50 m x 40 m

omtr. = 2 x lengte + 2 x breedte

omtr. = 2 x 50 m + 2 x 40 m

**Opgave 57**

 1 dm = 10 cm  $2,5 \times 10$ 
**C 25 cm**
**Opgave 58**
 $\pm 2$  meter = 20 dm

**B 20 dm**
**Opgave 59**

1 kilo = 1000 gram

 2490 gram =  $\pm 2500$  gram

**C 2,5 kilo**
**Opgave 60**

7,6 km = 7600 m

**B 7 km en 600 m**
**Opgave 61**

 395 m =  $\pm 400$  m

Vier gelijke zijden: 400 m : 4

**D 100 m**
**Opgave 62**

 30 liter = 30 dm<sup>3</sup>

inh. = lengte x breedte x hoogte

 30 dm<sup>3</sup> = 5 dm x 3 dm x **2 dm**

2 dm = 20 cm

**C 20 cm**
**Opgave 63**

inh. = lengte x breedte x hoogte

inh. = 5 m x 4 m x 0,25 m

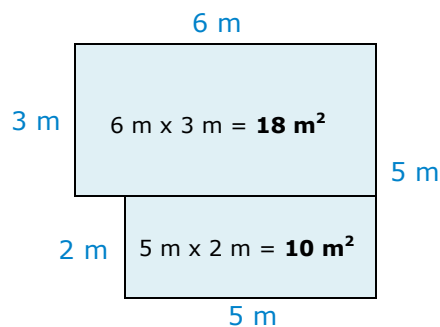
**B 5 m<sup>3</sup>**
**Opgave 64**

 1 kg = 1000 g  $0,650 \times 1000$ 
**B 650 gram**
**Opgave 65**

omtr. = 2 x lengte + 2 x breedte

omtr. = 2 x 6 m + 2 x 5 m

Of: 6 m + 5 m + 5 m + 2 m + 1 m + 3 m

**A 22 m**
**Opgave 66**

**C 28 m<sup>2</sup>**

 opp. = 18 m<sup>2</sup> + 10 m<sup>2</sup>
**Opgave 67**

 1 km = 1000 m  $1,4 \times 1000$ 
**C 1400 m**
**Opgave 68**

1 l = 100 cl = 1000 ml

 10 ml = 1 cl  $750 : 10$ 
**C 75 cl**
**Opgave 69**

1 km = 1000 m

 30 ha = 30 hm<sup>2</sup> = 300.000 m<sup>2</sup>

oppervlakte = lengte x breedte

 300.000 m<sup>2</sup> = 1000 m x 300 m

Of:

1 km = 10 hm

 30 ha = 30 hm<sup>2</sup> = 10 hm x 3 hm

3 hm = 300 m

**C 300 m**
**Opgave 70**

8 kilo = 8000 gram

**C 40 bakjes**

	x 5		x 8
<b>bakjes</b>	1	5	40
<b>gram</b>	200	1000	8000
	x 5	x 8	

**Opgave 71**

 12.000 l = 12.000 dm<sup>3</sup>

lengte = 5 m = 50 dm

breedte = 3 m = 30 dm

inh. = lengte x breedte x hoogte/diepte

 12.000 dm<sup>3</sup> = 50 dm x 30 dm x ? dm

50 x 30 = 1500

 12.000 dm<sup>3</sup> = 50 dm x 30 dm x 8 dm

8 dm = 80 cm

**B 80 cm**
**Opgave 72**

6 m = 600 cm

In de lengte dus 20 tegels.

(600 cm : 30 cm)

Steeds 4 tegels (in de breedte) naast

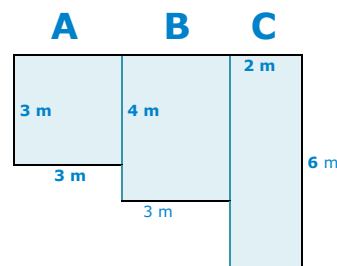
elkaar.

4 x 20 tegels

**A 80 tegels**
**Opgave 73**

opp. = lengte x breedte

Maak er 1 vierkant en 2 rechthoeken van.


**D 33 m<sup>2</sup>**

 opp. A = 3 m x 3 m = 9 m<sup>2</sup>

 opp. B = 4 m x 3 m = 12 m<sup>2</sup>

 opp. C = 6 m x 2 m = 12 m<sup>2</sup>

 Samen: **33 m<sup>2</sup>**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37		
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C	A	B	B	B	D	C	C	B	B	D	B	C	C	B	D	B	D	D	C	D	B	A	D	D	D	C	A	B	C	B	C	C	C	C	B	
38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	
C	B	B	C	C	C	C	D	C	B	D	C	B	B	D	A	B	B	D	C	B	C	D	C	B	B	A	C	C	C	C	B	A	D			