

OVERZICHT FORMULES:

$$\text{omtrek cirkel} = \pi \times \text{diameter}$$

$$\text{oppervlakte cirkel} = \pi \times \text{straal}^2$$

$$\text{inhoud prisma} = \text{oppervlakte grondvlak} \times \text{hoogte}$$

$$\text{inhoud cilinder} = \text{oppervlakte grondvlak} \times \text{hoogte}$$

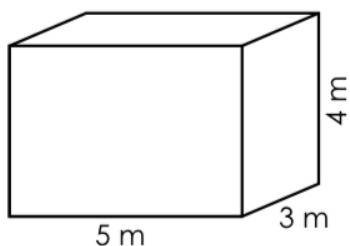
$$\text{inhoud kegel} = \frac{1}{3} \times \text{oppervlakte grondvlak} \times \text{hoogte}$$

$$\text{inhoud piramide} = \frac{1}{3} \times \text{oppervlakte grondvlak} \times \text{hoogte}$$

$$\text{inhoud bol} = \frac{4}{3} \times \pi \times \text{straal}^3$$

Opgave 1

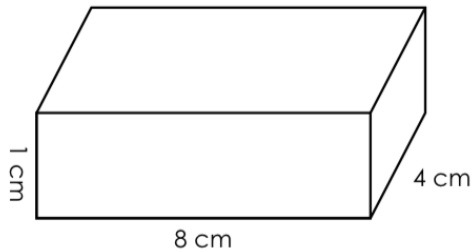
Bereken de totale oppervlakte van dit hele ruimtefiguur.



$$\begin{array}{r} 5 \text{ m} \times 4 \text{ m} = 20 \text{ m}^2 \\ 5 \text{ m} \times 4 \text{ m} = 20 \text{ m}^2 \\ 4 \text{ m} \times 3 \text{ m} = 12 \text{ m}^2 \\ 4 \text{ m} \times 3 \text{ m} = 12 \text{ m}^2 \\ 3 \text{ m} \times 5 \text{ m} = 15 \text{ m}^2 \\ 3 \text{ m} \times 5 \text{ m} = 15 \text{ m}^2 \\ \hline 94 \text{ m}^2 \end{array}$$

Opgave 2

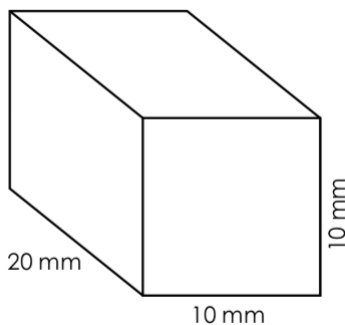
Bereken de totale oppervlakte van dit hele ruimtefiguur.



$$\begin{array}{r}
 8 \text{ cm} \times 1 \text{ cm} = 8 \text{ cm}^2 \\
 8 \text{ cm} \times 1 \text{ cm} = 8 \text{ cm}^2 \\
 1 \text{ cm} \times 4 \text{ cm} = 4 \text{ cm}^2 \\
 1 \text{ cm} \times 4 \text{ cm} = 4 \text{ cm}^2 \\
 4 \text{ cm} \times 8 \text{ cm} = 32 \text{ cm}^2 \\
 4 \text{ cm} \times 8 \text{ cm} = 32 \text{ cm}^2 \\
 \hline
 + 32 \text{ cm}^2 \\
 \hline
 88 \text{ cm}^2
 \end{array}$$

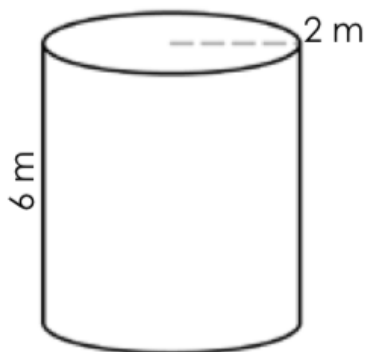
Opgave 3

Bereken de totale oppervlakte van dit hele ruimtefiguur.



$$\begin{array}{r}
 10 \text{ mm} \times 10 \text{ mm} = 100 \text{ mm}^2 \\
 10 \text{ mm} \times 10 \text{ mm} = 100 \text{ mm}^2 \\
 10 \text{ mm} \times 20 \text{ mm} = 200 \text{ mm}^2 \\
 10 \text{ mm} \times 20 \text{ mm} = 200 \text{ mm}^2 \\
 20 \text{ mm} \times 10 \text{ mm} = 200 \text{ mm}^2 \\
 20 \text{ mm} \times 10 \text{ mm} = 200 \text{ mm}^2 \\
 \hline
 + 200 \text{ mm}^2 \\
 \hline
 1\,000 \text{ mm}^2
 \end{array}$$

Opgave 4



Bereken de totale oppervlakte van dit hele ruimtefiguur.
Rond je antwoord af op 2 decimalen.

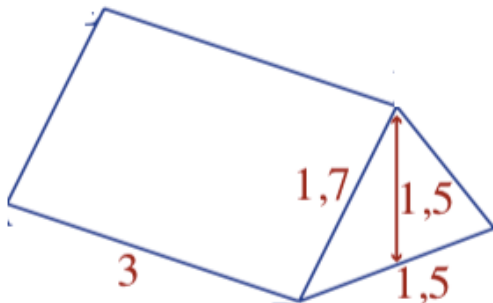
$$\begin{array}{l}
 \text{opp. bovenkant} = \pi \cdot 2^2 = 12,566\dots \\
 \text{opp. onderkant} = 12,566
 \end{array}$$

$$\begin{array}{l}
 \text{omtrek} = \pi \cdot 4 = 12,566\dots \\
 \text{opp. zijkant} = 12,566\dots \cdot 6 = 75,398\dots
 \end{array}$$

$$12,566\dots + 12,566\dots + 75,398\dots = \mathbf{100,53 \text{ m}^2}$$

Opgave 5

Bereken de totale oppervlakte van dit hele ruimtefiguur.

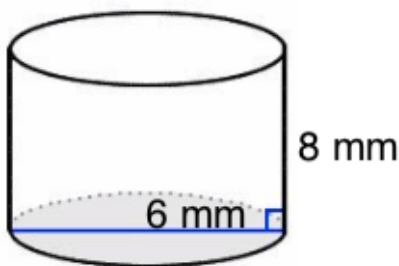


$$\begin{aligned} \text{voorkant} &= 1,5 \times 1,5 : 2 = 1,125 \text{ cm}^2 \\ \text{achterkant} &= 1,5 \times 1,5 : 2 = 1,125 \text{ cm}^2 \\ \text{Onderkant} &= 3 \times 1,5 = 4,5 \text{ cm}^2 \\ \text{zijkant 1} &= 3 \times 1,7 = 5,1 \text{ cm}^2 \\ \text{zijkant 2} &= 3 \times 1,7 = 5,1 \text{ cm}^2 \end{aligned}$$

$$\text{Totaal} = 1,125 + 1,125 + 4,5 + 5,1 + 5,1 = \mathbf{16,95 \text{ cm}^2}$$

Opgave 6

Bereken de totale oppervlakte van dit hele ruimtefiguur. Rond je antwoord af op 2 decimalen.



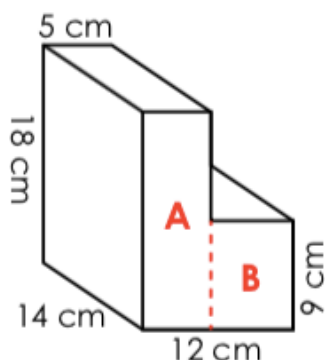
$$\begin{aligned} \text{opp. bovenkant} &= \pi \cdot 3^2 = 28,274\dots \\ \text{opp. onderkant} &= 28,274\dots \end{aligned}$$

$$\begin{aligned} \text{omtrek} &= \pi \cdot 6 = 18,8495\dots \\ \text{opp. zijkant} &= 18,8495\dots \cdot 8 = 150,796\dots \end{aligned}$$

$$28,274\dots + 28,274\dots + 150,796\dots = \mathbf{207,34 \text{ mm}^2}$$

Opgave 7

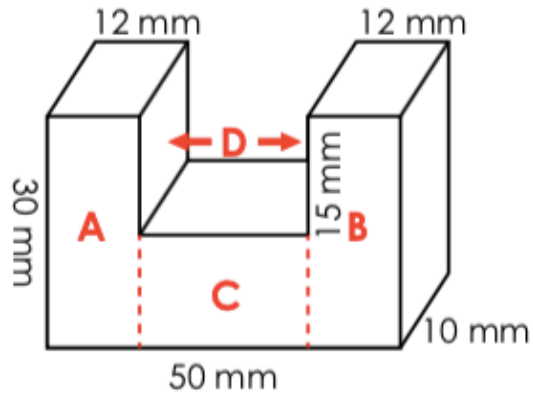
Bereken de totale oppervlakte van dit hele ruimtefiguur.



$$\begin{aligned} 18 \text{ cm} \times 14 \text{ cm} &= 252 \text{ cm}^2 \\ 18 \text{ cm} \times 14 \text{ cm} &= 252 \text{ cm}^2 \\ 14 \text{ cm} \times 12 \text{ cm} &= 168 \text{ cm}^2 \\ 14 \text{ cm} \times 12 \text{ cm} &= 168 \text{ cm}^2 \\ \text{(A) } 5 \text{ cm} \times 18 \text{ cm} &= 90 \text{ cm}^2 \\ \text{(A) } 5 \text{ cm} \times 18 \text{ cm} &= 90 \text{ cm}^2 \\ \text{(B) } 7 \text{ cm} \times 9 \text{ cm} &= 63 \text{ cm}^2 \\ \text{(B) } 7 \text{ cm} \times 9 \text{ cm} &= 63 \text{ cm}^2 \\ &+ 63 \text{ cm}^2 \\ \hline &= \mathbf{1\ 146 \text{ cm}^2} \end{aligned}$$

Opgave 8

Bereken de totale oppervlakte van dit hele ruimtefiguur.



$30 \text{ mm} \times 10 \text{ mm} =$	300 mm^2
$30 \text{ mm} \times 10 \text{ mm} =$	300 mm^2
$10 \text{ mm} \times 50 \text{ mm} =$	500 mm^2
$10 \text{ mm} \times 50 \text{ mm} =$	500 mm^2
(A) $30 \text{ mm} \times 12 \text{ mm} =$	360 mm^2
(A) $30 \text{ mm} \times 12 \text{ mm} =$	360 mm^2
(B) $30 \text{ mm} \times 12 \text{ mm} =$	360 mm^2
(B) $30 \text{ mm} \times 12 \text{ mm} =$	360 mm^2
(C) $15 \text{ mm} \times 26 \text{ mm} =$	390 mm^2
(C) $15 \text{ mm} \times 26 \text{ mm} =$	390 mm^2
(D) $15 \text{ mm} \times 10 \text{ mm} =$	150 mm^2
(D) $15 \text{ mm} \times 10 \text{ mm} =$	$+ 150 \text{ mm}^2$
	<hr/>
	$4\ 120 \text{ mm}^2$