

Gr. 9 Wiskunde Memorandums (Week 1)

Ⓜ 1.1) $-1; 1; 3; 5; 7$

1.2) $T_n = 2n - 3$

1.3) $T_{50} = 2(50) - 3$
 $= 97$

1.4) $37 = 2n - 3$

$$37 + 3 = 2n$$

$$40 = 2n$$

$$20 = n$$

Ⓦ 2.1) 15 vuurhoutjies

2.2) $T_n = 3n + 3$

2.3) $T_{25} = 3(25) + 3$
 $= 78$

2.4) $306 = 3n + 3$

$$306 - 3 = 3n$$

$$303 = 3n$$

$$101 = n$$

Ⓟ 3.1) 1) $6; 10; 14; 18; 22$

3.1) 2) $T_n = 4n + 2$

3.1) 3) $T_{10} = 4(10) + 2$
 $= 42$

3.2) 1) $2; 4; 8; 16; 32; 64$

3.2) 2) $T_n = 2^n$

3.2) 3) $T_{10} = 2^{10}$
 $= 1024$

3.3) 1) $1; 4; 9; 16; 25; 36; 49$

3.3) 2) $T_n = n^2$

3.3) 3) $T_{10} = 10^2$
 $= 100$

3.4) 1) $2; 5; 10; 17; 26; 35$

3.4) 2) $T_n = n^2 + 1$

3.4) 3) $T_{10} = 10^2 + 1$
 $= 101$

WISKUNDE – WEEK 2

HOOFSTUK 11 – OMTREK EN OPPERVLAKTE:

Maandag – FORMULES – LEER!

	<u>OMTREK</u> (eenhede)	<u>OPPERVLAKTE</u> (eenhede ²)
<u>VIERKANT</u>	$Om = s + s + s + s$	$Opp = s \times s$
<u>DRIEHOEK</u>	$Om = s + s + s$	$Opp = \frac{1}{2} (basis \times \perp \text{ hoogte})$ <i>by h</i>
<u>REGHOEK</u>	$Om = l + b + l + b$	$Opp = l \times b$
<u>PARALLELOGRAM</u> <u>RUIT</u>	$Om = s + s + s + s$	$Opp = \text{basis} \times \text{hoogte}$
<u>TRAPESIUM</u>	$Om = s + s + s + s$	$Opp = \frac{1}{2} (\text{som v parallele sye})$
<u>VLIEËR</u>	$Om = s + s + s + s$	$Opp = \frac{1}{2} (\text{produk v hoeklyne})$
<u>SIRKEL</u>	$Om = 2\pi r$ (r → radius) $Om = d\pi$ (d → deursnee)	$Opp = \pi r^2$ $[r = \frac{1}{2} d]$

Omskakeling van lengtes:

$$1\text{km} = 1\,000\text{m}$$

$$1\text{m} = 1\,000\text{mm} = 100\text{cm}$$

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

Maandag Huiswerk (vul in)

$$3\text{km} = \dots\dots\dots\text{m}$$

$$30\text{m} = \dots\dots\dots\text{mm} = \dots\dots\dots\text{cm}$$

$$3,5\text{cm} = \dots\dots\dots\text{mm}$$

Omskakeling van oppervlaktes:

$$1\text{km}^2 = 1\text{km} \times 1\text{km}$$

$$= 1\,000\text{m} \times 1\,000\text{m}$$

$$= 1\,000\,000\text{m}^2$$

$$4\text{km}^2 = \dots\dots\dots\text{m}^2$$

$$10\text{km}^2 = \dots\dots\dots\text{m}^2$$

$$5,34\text{km}^2 = \dots\dots\dots\text{m}^2$$

$$1\text{m}^2 = 1\text{m} \times 1\text{m}$$

$$= 100\text{cm} \times 100\text{cm}$$

$$= 10\,000\text{cm}^2$$

$$7\text{m}^2 = \dots\dots\dots\text{cm}^2$$

$$98\text{m}^2 = \dots\dots\dots\text{cm}^2$$

$$4\text{cm}^2 = \dots\dots\dots\text{mm}^2$$

Woensdag - Voorbeelde oor omtrek en oppervlakte:

- 1.1. Identifiseer die figuur hieronder.

Reghoek

- 1.2. Bepaal die omtrek van die figuur.

$$\text{Om.: } 2(l+b) \text{ of } l+b+l+b$$

$$\therefore 4 + 3,6 + 4 + 3,6 = 15,2 \text{ m.}$$

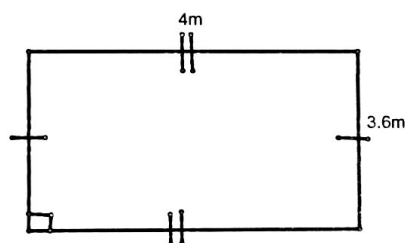
- 1.3. Bepaal die oppervlakte van die figuur.

$$\text{Opp: } l \times b$$

$$= 4 \times 3,6$$

$$= 14,4 \text{ m}^2$$

- 1.4. Skakel die omtrek en oppervlakte om na cm en cm^2 . (kyk: omskakeling!)
omtrek: $15,2 \times 100 = 1520 \text{ cm}$
oppervlak: $1440 \times 1440 = 2073600 \text{ cm}^2$



- 2.1. Identifiseer die figuur hieronder.

Driehoek

- 2.2. Bepaal die omtrek van die figuur.

$$\text{Om: } s + s + s$$

$$= 3 + 5 + 7$$

$$= 15 \text{ m}$$

- 2.3. Bepaal die oppervlakte van die figuur.

$$\text{opp: } \frac{1}{2} (b \times \perp h)$$

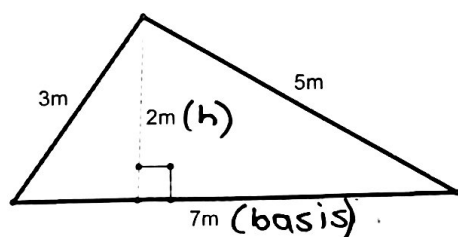
$$= \frac{1}{2} (7 \times 2)$$

$$= 7 \text{ m}^2$$

- 2.4. Skakel die omtrek en oppervlakte om na cm en cm^2 .

$$\text{omtrek: } 15 \times 100 = 1500 \text{ cm}$$

$$\text{oppervlak: } 700 \times 700 = 490000 \text{ cm}^2$$



- 3.1. Identifiseer die figuur hieronder.

Driehoek

- 3.2. Bepaal die omtrek van die figuur.

$$\begin{aligned} O_m &: 5 + 5 + 5 \\ &= 5 + 4 + 2 \\ &= 11 \text{ m} \end{aligned}$$

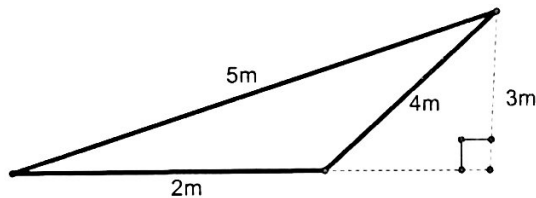
- 3.3. Bepaal die oppervlakte van die figuur.

$$\begin{aligned} \text{Opp} &: \frac{1}{2} (b \times \perp h) \\ &= \frac{1}{2} (2 \times 3) \\ &= 3 \text{ m}^2 \end{aligned}$$

- 3.4. Skakel die omtrek en oppervlakte om na cm en cm^2 .

$$\text{omtrek} : 11 \times 100 = 1100 \text{ cm}$$

$$\begin{aligned} \text{oppervlak} &: 300 \times 300 \\ &= 90000 \text{ cm}^2 \end{aligned}$$



Woensdag HUISWERK	Oefening 1	Bl. 147	# a, c, d	Handtekening:
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Donderdag:

- 4.1. Identifiseer die figuur hieronder.

Sirkel

- 4.2. Bepaal die omtrek van die figuur.

$$\begin{aligned} O_m &: d \pi \\ &= 10 \times \pi \\ &= 10 \pi / 31,42 \text{ cm} \end{aligned}$$

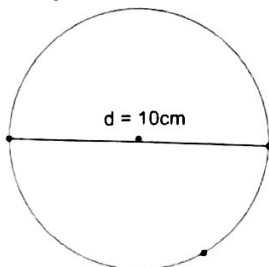
- 4.3. Bepaal die oppervlakte van die figuur.

$$\begin{aligned} \text{Opp} &: \pi r^2 \\ &= \pi \left(\frac{1}{2} \times 10\right)^2 \\ &= 25 \pi / 78,54 \text{ cm}^2 \end{aligned}$$

- 4.4. Skakel die omtrek en oppervlakte om na mm en mm^2 .

$$\text{omtrek} : 10 \pi \times 10 = 100 \pi / 314,16 \text{ mm}$$

$$\text{oppervlak} : 250 \pi \times 250 \pi = 616850,28 \text{ mm}^2$$



- 5.1. Bepaal die omtrek van die figuur.

$$\begin{aligned} \text{om: } & 5 + 5 + 5 + \dots \\ & = 3 + 3 + 3 + 3 + 3 + 6 + 9 + 6 \\ & = 36 \text{ cm} \end{aligned}$$

- 5.2. Bepaal die oppervlakte van die figuur. (verdeel figuur)

$$\text{opp. ①} = l \times b : 6 \times 3 = 18 \text{ cm}^2$$

$$\text{②} = l \times b : 3 \times 3 = 9 \text{ cm}^2$$

$$\text{③} = l \times b : 6 \times 3 = 18 \text{ cm}^2$$

$$(\text{①} + \text{②} + \text{③}) : 18 + 9 + 18 = 45 \text{ cm}^2$$

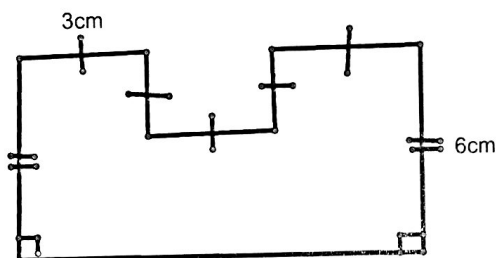
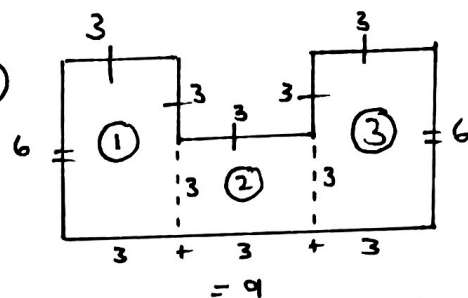
- 5.3. Skakel die omtrek en oppervlakte om na mm en mm².

$$\text{omtrek: } 36 \times 10 = 360 \text{ mm}$$

$$\text{oppervlak: ① } 180 \times 180 = 32400 \text{ mm}^2 + \text{② } 90 \times 90 = 8100 \text{ mm}^2 +$$

$$\text{③ } 180 \times 180 = 32400 \text{ mm}^2$$

$$= 72900 \text{ mm}^2$$



- 6.1. Bepaal die omtrek van die figuur.

$$\text{om: } 5 + 5 + 5$$

$$= 8 + 10 + 6$$

$$= 24 \text{ cm}$$

$$\rightarrow AC^2 = 10^2 - 8^2 \text{ (pyth)}$$

$$AC = 6 \text{ cm}$$

- 6.2. Bepaal die oppervlakte van die figuur.

$$\text{opp: } \frac{1}{2} (b \times h)$$

$$= \frac{1}{2} (6 \times 8)$$

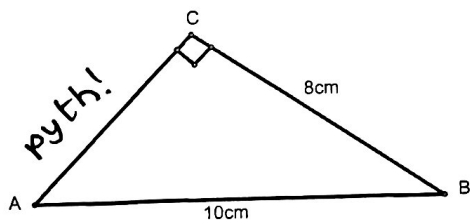
$$= 24 \text{ cm}^2$$

onthou: basis is by h

- 6.3. Skakel die omtrek en oppervlakte om na mm en mm².

$$\text{omtrek: } 24 \times 10 = 240 \text{ mm}$$

$$\text{oppervlak: } 240 \times 240 = 57600 \text{ mm}^2$$



Donderdag HUISWERK	Oef 1 & Oef 2	Bl. 147 Bl. 150	# e # a	Handtekening:
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