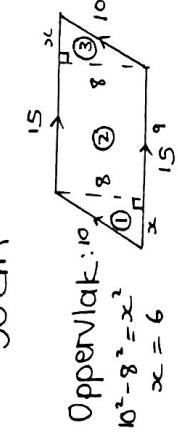


Gr. 9 Wiskunde - Memorandum (Week 3)

(N) Bl. 20¹; Oef 4

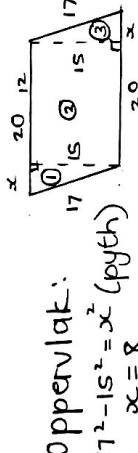
(a) Omtrek: $s+s+s+s$
 $= 10 + 14 + 10 + 14$
 $= 48 \text{ cm}$



Oppervlak:
 $\begin{aligned} 10^2 - 8^2 &= x^2 \\ x &= 6 \end{aligned}$
 $\begin{aligned} &\Delta + \square + \Delta \\ &= \frac{1}{2}(b \times h) + (l \times b) + \frac{1}{2}(b \times h) \\ &= \frac{1}{2}(6 \times 8) + (8 \times 8) + \frac{1}{2}(6 \times 8) \\ &= 24 + 64 + 24 \\ &= 112 \text{ cm}^2 \end{aligned}$

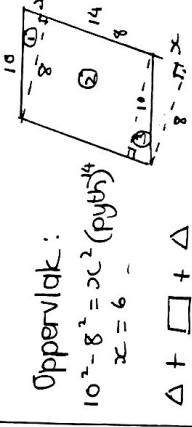
(W) Bl. 204; Oef 5

(b) Omtrek: $s+s+s+s$
 $= 20 + 17 + 20 + 17$
 $= 74 \text{ cm}$



Oppervlak:
 $\begin{aligned} 17^2 - 15^2 &= x^2 \\ x &= 8 \end{aligned}$
 $\begin{aligned} &\Delta + \square + \Delta \\ &= \frac{1}{2}(b \times h) + (l \times b) + \frac{1}{2}(b \times h) \\ &= \frac{1}{2}(8 \times 15) + (12 \times 5) + \frac{1}{2}(8 \times 15) \\ &= 60 + 180 + 60 \\ &= 300 \text{ cm}^2 \end{aligned}$

(K) Omtrek: $s+s+s+s$
 $= 10 + 14 + 10 + 14$
 $= 48 \text{ cm}$



Oppervlak:
 $\begin{aligned} 10^2 - 8^2 &= x^2 \\ x &= 6 \end{aligned}$
 $\begin{aligned} &\Delta + \square + \Delta \\ &= \frac{1}{2}(b \times h) + (l \times b) + \frac{1}{2}(b \times h) \\ &= \frac{1}{2}(6 \times 8) + (8 \times 8) + \frac{1}{2}(6 \times 8) \\ &= 24 + 64 + 24 \\ &= 112 \text{ cm}^2 \end{aligned}$

(W) Bl. 204; Oef 5

(e) Omtrek: $s+s+s+s$
 $AB^2 = 18^2 + 8^2 (\text{pyth})$
 $AB = 19, 70 \text{ cm}$
 $\therefore CD = 19, 70 \text{ cm}$

$$AB^2 = 8^2 + 8^2 (\text{pyth})$$

$$AB = 11, 31 \text{ cm}$$

$$\therefore BC = 11, 31 \text{ cm}$$

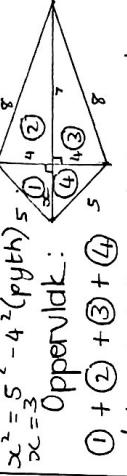
$$\begin{aligned} &\Delta + \square + \Delta \\ &= \frac{1}{2}(b \times h) + (l \times b) + \frac{1}{2}(b \times h) \\ &= \frac{1}{2}(19,70 + 19,70 + 11,31 + 11,31) \end{aligned}$$

$$\begin{aligned} &= 62,02 \text{ cm} \\ &\therefore \text{Oppervlak:} \\ &\quad \textcircled{1} + \textcircled{2} + \textcircled{3} + \textcircled{4} \\ &= \frac{1}{2}(8 \times 8) + \frac{1}{2}(18 \times 8) + \frac{1}{2}(18 \times 8) + \frac{1}{2}(8 \times 8) \end{aligned}$$

(q) Omtrek: $s+s+s+s$

$$= 5 + 8 + 8 + 5$$

$$= 26 \text{ cm}$$



Oppervlak:
 $\begin{aligned} 17^2 - 15^2 &= x^2 \\ x &= 8 \end{aligned}$
 $\begin{aligned} &\Delta + \square + \Delta \\ &= \frac{1}{2}(3 \times 4) + \frac{1}{2}(4 \times 7) + \frac{1}{2}(4 \times 7) + \frac{1}{2}(3 \times 4) \\ &= 6 + 14 + 14 + 6 \\ &= 40 \text{ cm}^2 \end{aligned}$

$$\therefore \text{om: } 3 + 3 + 4 + 4 = 14 \text{ cm}$$

Oppervlak:

$$\begin{aligned} &\textcircled{1} + \textcircled{2} \\ &= \frac{1}{2}(3 \times 4) + \frac{1}{2}(3 \times 4) \\ &= 6 + 6 \\ &= 12 \text{ cm}^2 \end{aligned}$$

(e) Omtrek: $s+s+s+s$
 $AB^2 = 18^2 + 8^2 (\text{pyth})$
 $AB = 19, 70 \text{ cm}$
 $\therefore CD = 19, 70 \text{ cm}$

$$AB^2 = 8^2 + 8^2 (\text{pyth})$$

$$AB = 11, 31 \text{ cm}$$

$$\therefore BC = 11, 31 \text{ cm}$$

$$\begin{aligned} &\Delta + \square + \Delta \\ &= \frac{1}{2}(b \times h) + (l \times b) + \frac{1}{2}(b \times h) \\ &= \frac{1}{2}(19,70 + 19,70 + 11,31 + 11,31) \end{aligned}$$

$$\begin{aligned} &= 62,02 \text{ cm} \\ &\therefore \text{Oppervlak:} \\ &\quad \textcircled{1} + \textcircled{2} + \textcircled{3} + \textcircled{4} \\ &= \frac{1}{2}(8 \times 8) + \frac{1}{2}(18 \times 8) + \frac{1}{2}(18 \times 8) + \frac{1}{2}(8 \times 8) \end{aligned}$$

(f) Omtrek: $s+s+s+s$

$$\begin{aligned} BC^2 &= 5^2 - 3^2 \\ BC &= 4 \text{ cm} \end{aligned}$$

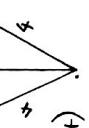
$$\begin{aligned} &\therefore DC = 4 \text{ cm} \\ &\therefore AB = 3 \text{ cm} \end{aligned}$$

Oppervlak:
 $\begin{aligned} &\Delta + \square + \Delta \\ &= \frac{1}{2}(b \times h) + (l \times b) + \frac{1}{2}(b \times h) \\ &= \frac{1}{2}(8 \times 15) + (12 \times 5) + \frac{1}{2}(8 \times 15) \\ &= 60 + 180 + 60 \\ &= 300 \text{ cm}^2 \end{aligned}$

(D) huiswerk

$$\begin{aligned} (14) \text{Opp: } &\square - \frac{1}{2}O - \frac{1}{4}O \\ &= (l \times b) - \frac{1}{2}(\pi r^2) - \frac{1}{4}(\pi r^2) \\ &= (6 \times 6) - \frac{1}{2} \times \pi (\frac{1}{2} \times 6)^2 - \frac{1}{4}(\pi 3^2) \\ &= 36 - 14,14 - 7,07 \\ &= 14,79 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} (15) \text{Opp: } &\Delta - O \\ &= \frac{1}{2}(b \times h) - \pi r^2 \\ &= \frac{1}{2}(12 \times 9) - \pi (4^2) \\ &= 54 - 16\pi \\ &= 3,73 \text{ cm}^2 \end{aligned}$$



Oppervlak:

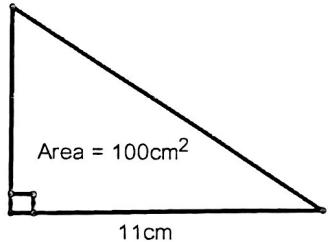
$$\begin{aligned} &\textcircled{1} + \textcircled{2} + \textcircled{3} + \textcircled{4} \\ &= \frac{1}{2}(8 \times 8) + \frac{1}{2}(18 \times 8) + \frac{1}{2}(18 \times 8) + \frac{1}{2}(8 \times 8) \end{aligned}$$

WISKUNDE – WEEK 4 :

OPPERVLAKTE (area) IS GEGEE – VIND DIE ONTBREKENDE LENGTE

Maandag:

1. Bepaal die hoogte van die driehoek



$$\text{Opp } \Delta = \frac{1}{2} (b \times h)$$

$$100 = \frac{1}{2} (11 \times h)$$

$$100 \div \frac{1}{2} = 11 \times h$$

$$200 = 11 \times h$$

$$18,1818\dots = h$$

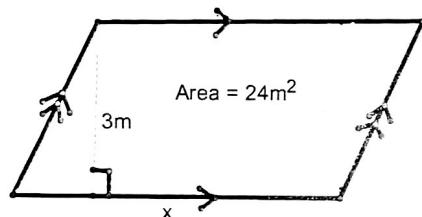
Toets!

$$\frac{1}{2} (11 \times 18,18\dots)$$

$$= 99,999\dots$$

$$= 100$$

2. Bepaal die waarde van x in die parallelogram.



$$\text{opp v. II}^m (\text{parallelogram}) = b \times h$$

$$24 = x \times 3$$

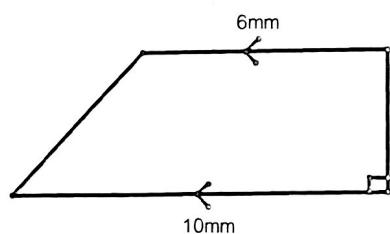
$$\frac{24}{3} = x$$

$$8 = x$$

Toets!

$$\frac{b \times h}{= 3 \times 8} = 24 \text{ m}^2$$

3. Bepaal die hoogte van die trapeesium hieronder as die Oppervlakte = 24 mm².



$$\text{opp v. trap.} = \frac{1}{2} (\text{som v. IIe sye}) \times h$$

$$24 = \frac{1}{2} (6+10) \times h$$

$$24 \times 2 = 16h$$

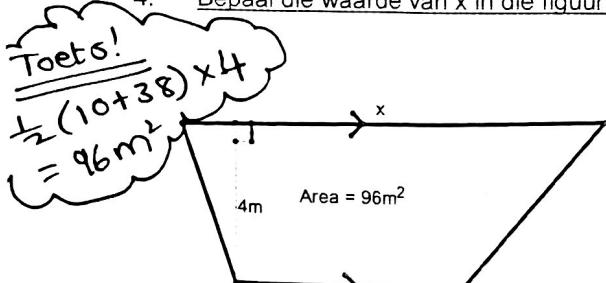
$$48 = 16h$$

$$3 = h$$

Toets!

$$\frac{1}{2} (6+10) \times 3 = 24 \text{ mm}^2$$

4. Bepaal die waarde van x in die figuur.



Toets!

$$\frac{1}{2} (10+38) \times 4$$

$$= 96 \text{ m}^2$$

$$\text{opp v. trap.} = \frac{1}{2} (\text{som v. IIe sye}) \times h$$

$$96 = \frac{1}{2} (10+x) \times 4$$

$$96 \times 2 = (10+x) \times 4$$

$$192 = (10+x) \times 4$$

$$192 \div 4 = 10 + x$$

$$48 = 10 + x$$

$$38 = x$$

NB: Hersien jou formule tabel!!

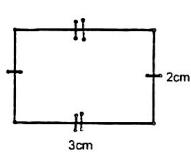
Maandag Bl. 198; Oef 2; # a,e,g
Huiswerk: Bl. 205; Oef 6; # c,e

EN

Woensdag:

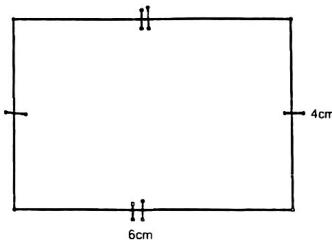
DIE EFFEK VAN DIE VERDUBBELING VAN AFMETINGS:

1.



$$\text{Omtrek} = 2 + 3 + 2 + 3 \\ = 10\text{cm}$$

$$\text{Oppervlakte} = 3 \times 2 \\ = 6\text{cm}^2$$



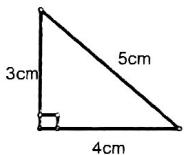
$$\text{Omtrek} = 4 + 6 + 4 + 6 \\ = 20\text{cm}$$

$$\text{Oppervlakte} = 4 \times 6 \\ = 24\text{cm}^2$$

Let op:

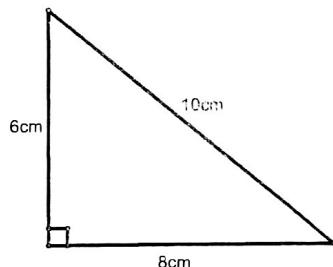
As die afmetings verdubbel dan is die omtrek **twee** keer groter en die oppervlakte **vier** keer groter.

2.



$$\text{Omtrek} = 3 + 4 + 5 \\ = 12\text{cm}$$

$$\text{Oppervlakte} = \frac{1}{2} \times 3 \times 4 \\ = 6\text{cm}^2$$



$$\text{Omtrek} = 6 + 8 + 10 \\ = 24\text{cm}$$

$$\text{Oppervlakte} = \frac{1}{2} \times 6 \times 8 \\ = 24\text{cm}^2$$

Woensdag HUISWERK	Oefening 7	Bl. 205 206	# b, c	Handtekening:
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Donderdag: AS DIE AFMETINGS VERDUBBEL WORD:

OMTREK X 2

OPPERVLAKTE X 4

- 11 Dit word gegee dat 'n figuur 'n omtrek van $7y$ en 'n oppervlakte van $10y^3$. Bepaal die omtrek en oppervlakte van die nuwe figuur as al die Afmetings verdubbel word.
Om = $14y$ (omtrek x 2)

$$\text{Opp} = \dots 40y^3 \dots \text{ (oppervlakte x 4)}$$

Huiswerk: Bl. 207; Oef 7; #i