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Syferkunde
Wiskunde
Leierskap

Hersiening Inoefening Vaslegging

Graad 7 – Kwartaal 3 – Werkopdrag 1 – 2024

MEMORANDUM

Afdeling A – Meetkunde van reguitlyne:

1.1 Teken lyn ST

(1)

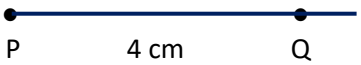
1.2 Teken lynsegment DE

(1)

1.3 Teken straal MN

(1)

1.4 Teken lynsegment PQ 4 cm lank

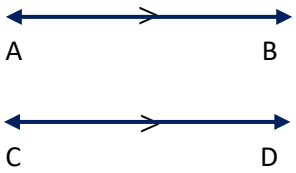


(1)

1.5 Verleng PQ in 1.4 na R met QR = 3 cm

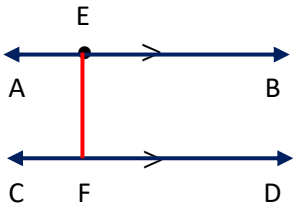
(1)

2.1 Teken lyne AB en CD ewewydig aan mekaar



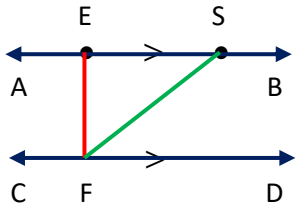
(2)

2.2 Merk enige punt E op lyn AB in 2.1 en teken EF loodreg op lyn CD met F op CD



(2)

2.3 Bepaal punt S op lyn AB, sodat ∠SFD = 45°.



(2)

2.4.1 90° (1)
2.4.2 90° (1)

2.5.1 ONWAAR (1)
2.5.2 WAAR (1)
2.5.3 ONWAAR (1)

Afdeling B – Konstruksies:

1.1 45° 1.2 30°
1.3 130° 1.4 150°
1.5 20° 1.6 Skerphoek
1.7 45° 1.8 Skerphoek
1.9 105° 1.10 Stomphoek (10)

2. Die mates mag $\pm$ 1° te klein of te groot wees

2.1 ∠ABC = 106° STOMPHOEK (2)
2.2 ∠XYZ = 345° INSPRINGENDE/REFLEKSE HOEK (2)
2.3 ∠DEF = 54° SKERPHOEK (2)
2.4 ∠EFG = 180° GESTREKTE HOEK (2)
2.5 ∠QRS = 270° INSPRINGENDE/REFLEKSE HOEK (2)
2.6 ∠KLM = 90° REGTEHOEK (2)

3.1 SKERPHOEK 3.2 STOMPHOEK
3.3 INSPRINGENDE/REFLEKSE HOEK (3)

4.1 90°
4.2 $\pm$ 25 mm
4.3 OA = OB = OC
4.4 $\pm$ 35 mm
4.5 OA + OC = AC = $\pm$ 35 mm
4.6 AC = OA + OC (6)

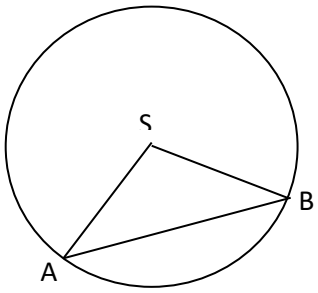
5.

Eienskap	Deel van sirkel	Antwoord [B]
Deel van die omtrek	**Radius**	**Boog**
Verbind die middelpunt met die rand van die sirkel	**Boog**	**Radius**
Lyn deur die middelpunt en raak beide kante	**Koord**	**Middellyn**
Lyn verbind twee punte en raak beide kante	**Sektor**	**Koord**
Boog en 2 radiusse	**Middellyn**	**Sektor**

(5)

[Nie op mates geteken nie]

6.1 Verbind die middelpunt S met A en B.
6.2 Hoeke A en B is ewe groot.
6.3 Gelykbenige driehoek
6.4 36° + 36° = 72°



(7)

Afdeling C – Meetkunde van 2D vorms:

1.1 $\angle A = 180° - (60° + 40°) = 180° - 100° = 80°$ (2)
Ongelyksydige driehoek (1)

1.2 $\angle D$ en $\angle E = 180° - 50° = 130°$ [Twee bene is dieselfde lengte – word aangedui] (2)
$130° \div 2 = 65°$
$\angle D = 65°$ en $\angle E = 65°$
Gelykbenige driehoek (1)

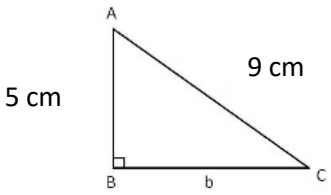
1.3 Wat word gegee BA = BC $\therefore$ is $\angle A$ ook $72°$
$\angle B \; x = 180° - (72° + 72°) = 180° - 144° = 36°$ (2)
Gelykbenige driehoek (1)

2.1 Reghoekige driehoek
2.2 Gelyksydige driehoek
2.3 Stomphoekige driehoek
2.4 Gelykbenige driehoek
2.5 Ongelyksydige driehoek (5)

3.1	75° + 35° = 110°	180° – 110° = 70°	(2)
3.2	18° + 105° = 123°	180° – 123° = 57°	(2)
3.3	45° + 90° = 135°	180° – 135° = 45°	(2)
3.4	69° + 89° = 158°	180° – 158° = 22°	(2)
3.5	50° + 50° = 100°	180° – 100° = 80°	(2)

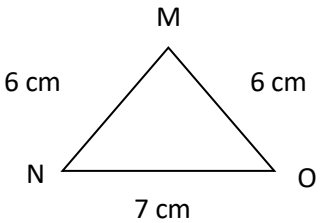
[Nie op mates geteken nie]

4.1



(3)

4.2.1



(2)

4.2.2 Hoeke is ewe groot – gelykbenige driehoek (1)

5.1 x = 360° – (70° + 50° + 90°)
x = 360° – 210°
x = 150° (3)

5.2 x = 360° – (50° + 155° + 55°)
x = 360° – 260°
x = 100° (3)

5.3 x = 360° – (94° + 81° + 57°)
x = 360° – 232°
x = 172° (3)

6.

EIENSKAPPE	**VIERHOEKE**	**ANTWOORD – B**
Alle sye en hoeke gelyk	Vlieër	**VIERKANT**
Al 4 hoeke is 90°	Parallelogram	**REGHOEK**
2 pare teenoorstaande sye ewewydig	Vierkant	**PARALLELOGRAM**
Alle sye gelyk	Reghoek	**RUIT**
1 paar aangrensende sye gelyk	Ruit	**VLIEËR**

(5)

7. Beide driehoeke is reghoekige driehoeke.
Beide driehoeke se skuinssye is ewe lank.
Beide driehoeke is ewe groot.
Beide driehoeke se vorm is dieselfde. (4)

8. Die vierhoeke se vorm is dieselfde → AB ∥ DC en EF ∥ HG en ∠ DAB = ∠ HEF
Die vierhoeke se groottes verskil → HG = $\frac{1}{2}$ DC en EF = $\frac{1}{2}$ AB (4)

9.1.1 60 mm (1)
9.1.2 60 x 4 = 240 mm (2)
9.1.3 90° (1)
9.2.1 (20 – 8) ÷ 2 x 2 = 12cm (2)
9.3.1 16,2 ÷ 3 = 5,4cm (2)

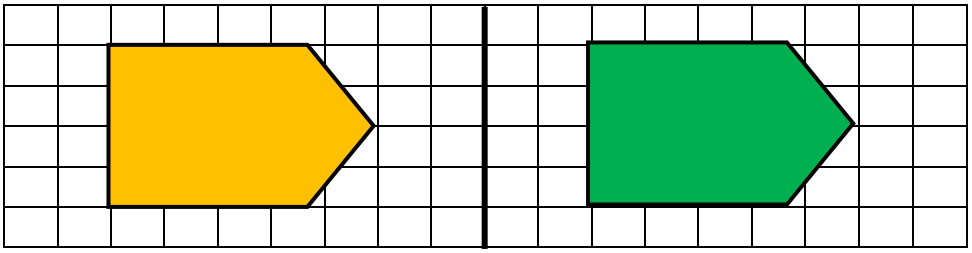
9.4.1 Oop getalsin: Omtrek = 2(l + b)
Bewerkings: = 2(370 + 280)
= 2 x 650
= 1 300
Antwoord: Die omtrek is 1 300 m (4)

9.4.2 Oop getalsin: 1 300 m x R21 = x
Bewerking: 1 300 x 21
= 273
Antwoord: Koste is R273 000 (4)

10. 24 driehoeke

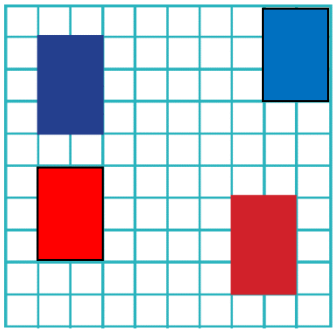
Afdeling D – Transformasie meetkunde:

1.



(1)

2.1 en 2.2



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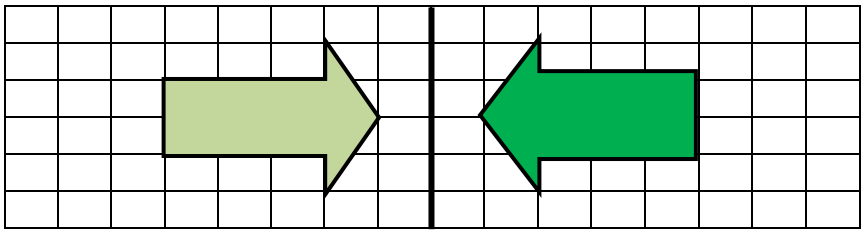
3.

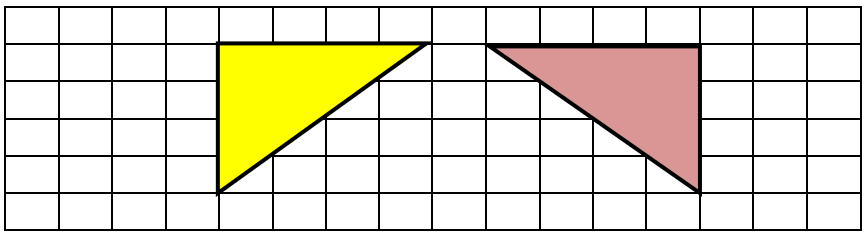


(1)

4.

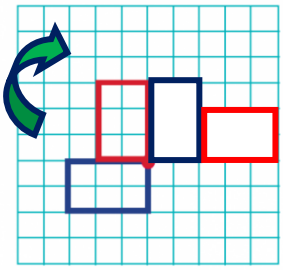
(1)

5.



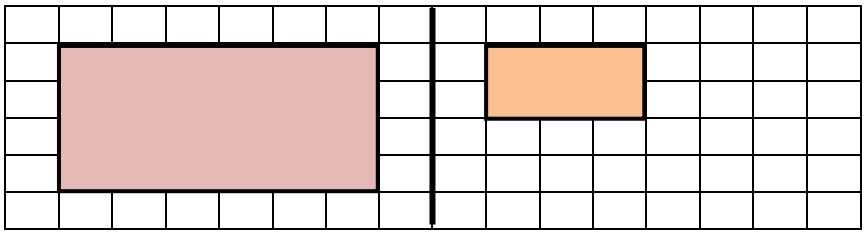
(1)

6.



(1)

7.



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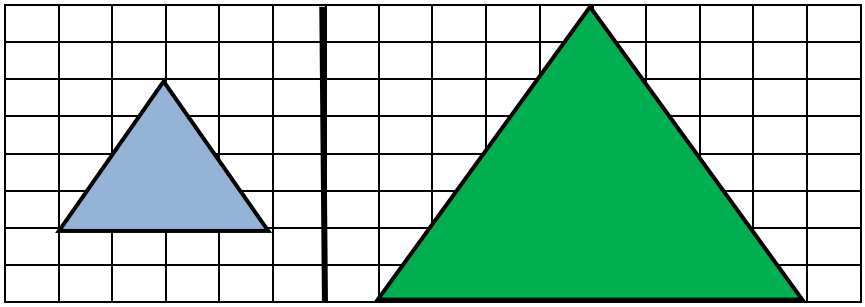
8.



(2)

9.1 Refleksie
9.2 Rotasie
9.3 Translasie (3)

10.1 Verklein met faktor $\frac{1}{2}$ of halveer die sye. (2)
10.2 Ja, die vorms is gelykvormig. Grootte verskil maar hoeke is ewe groot. (2)