Province of the
EASTERN CAPE
EDUCATION

GRADE/*GRAAD* 12

SEPTEMBER 2022

TECHNICAL MATHEMATICS P2/*TEGNIESE WISKUNDE V2*
MARKING GUIDELINE/*NASIENRIGLYN*

MARKS/*PUNTE*: 150

This marking guideline consists of 18 pages./
Hierdie nasienriglyn bestaan uit 18 bladsye.

NOTE:
- Continuous accuracy (CA) applies only where indicated in this marking guideline.
- Assuming values/answers in order to solve a problem is unacceptable.

LET WEL:
- *Volgehoue akkuraatheid (CA) is slegs van toepassing soos aangedui in hierdie nasienriglyn.*
- *Aanvaarding van waardes/antwoorde om 'n problem op te los, is onaanvaarbaar.*

MARKING CODES / *NASIENKODES*	
M	**Method /** *Metode*
A	**Accuracy /** *Akkuraatheid*
AO	**Answer only /** *Slegs antwoord*
CA	**Consistent accuracy /** *Deurlopende akkuraatheid*
F	**Formula /** *Formule*
I	**Identity /** *Identiteit*
R	**Rounding /** *Afronding*
S	**Simplification /** *Vereenvoudiging*
ST	**Statement /** *Bewering*
RE	**Reason /** *Rede*
ST RE	**Statement and correct reason /** *Bewering en korrekte rede*
SF	**Substitution correctly in correct formula /** *Korrekte vervanging in die korrekte formule*
NPU	**No penalty for omitting units /** *Geen penalisering vir eenhede uitgelaat*

QUESTION/*VRAAG* **1**

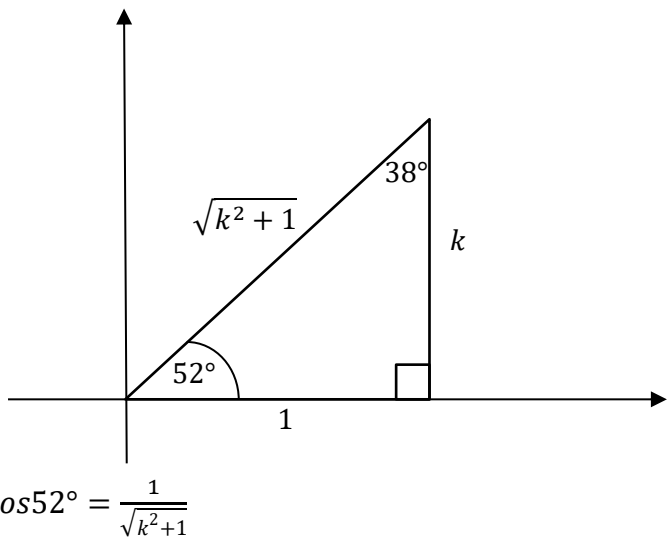| 1.1	$m_{AD} = \frac{y_2 - y_1}{x_2 - x_1}$ $m_{AD} = \frac{4-0}{0-(-1)}$ $m_{AD} = 4$ **AO: Full marks /** *Volpunte*	✓ **SF**　　　**A** ✓ **4**　　　**CA** 　　　　　(2)
1.2	$tan\theta = m_{AD}$ $tan\theta = 4$ $\theta = tan^{-1}(4)$ $\theta = 75,96° \approx 76°$	✓ **F**　　　**A** ✓ **SF**　　**CA** ✓ **76°**　**CA** 　　　　　(3)
1.3	$P\left(\frac{7+6}{2}; \frac{0+(-4)}{2}\right)$ $P\left(\frac{13}{2}; \frac{-4}{2}\right)$ $P\left(\frac{13}{2}; -2\right)$	✓ **SF**　　　**A** ✓ $\left(\frac{13}{2}; -2\right)$ **CA** 　　　　　(2)
1.4	$AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ $AB = \sqrt{(0-7)^2 + (4-0)^2}$ $AB = \sqrt{65}$ **AO: Full marks /** *Volpunte*	✓ **SF**　　　**A** ✓ $\sqrt{65}$　**CA** 　　　　　(2)

1.5	$m_{BC} = \frac{0-(-4)}{7-6}$ $m_{BC} = 4$		$m_{BC} = 4$ ($\parallel$ lines / *lyne*)	
	$\therefore m_{\perp} = -\frac{1}{4}$ $\therefore y = -\frac{1}{4}x + c$ $\left(\frac{13}{2}; -2\right): -2 = -\frac{1}{4}\left(\frac{13}{2}\right) + c$ $\therefore -2 = -\frac{13}{8} + c$ $\therefore -\frac{3}{8} = c$ $\therefore y = -\frac{1}{4}x - \frac{3}{8}$	**OR/** **OF**	$\therefore m_{\perp} = -\frac{1}{4}$ $\therefore y - y_1 = -\frac{1}{4}(x - x_1)$ $\left(\frac{13}{2}; -2\right): y - (-2) = -\frac{1}{4}\left(x - \frac{13}{2}\right)$ $\therefore y + 2 = -\frac{1}{4}x + \frac{13}{8}$ $\therefore y = -\frac{1}{4}x + \frac{13}{8} - 2$ $\therefore y = -\frac{1}{4}x - \frac{3}{8}$	✓ $m_{\perp} = -\frac{1}{4}$**CA** ✓ **sub** $\left(\frac{13}{2}; -2\right)$ **CA** ✓ $y = -\frac{1}{4}x - \frac{3}{8}$ **A** (3)
				[12]

QUESTION/*VRAAG* 2

2.1		
2.1.1	$y = -\sqrt{r^2 - x^2}$ $y = -\sqrt{(-4)^2 - x^2}$ $y = -\sqrt{16 - x^2}$	✓**SF** **A** ✓**Simplification/** *Vereenv.* **CA** ✓ $y = -\sqrt{16 - x^2}$ **CA** (3)
2.1.2	$m_{OQ} = \frac{y_2 - y_1}{x_2 - x_1}$ $m_{OQ} = \frac{0 - (-2\sqrt{3})}{0 - 2}$ $m_{OQ} = -\sqrt{3}$	✓**SF** **A** ✓ $m_{OQ} = -\sqrt{3}$ **CA** (2)

2.1.3	$m_{tangent} = \frac{1}{\sqrt{3}}$ $\therefore y = \frac{1}{\sqrt{3}}x + c$ $(0; -5): -5 = \frac{1}{\sqrt{3}}(0) + c$ $-5 = c$ $\therefore y = \frac{1}{\sqrt{3}}x - 5$ **OR/***OF*	$m_{tangent} = \frac{1}{\sqrt{3}}$ $\therefore y = \frac{1}{\sqrt{3}}x + c$ $(0; -5)$ implies $c = -5$ $\therefore y = \frac{1}{\sqrt{3}}x - 5$	✓ $\frac{1}{\sqrt{3}}$ **A** ✓ $y = \frac{1}{\sqrt{3}}x - 5$ **CA** (2)

2.2.1		✓ **elliptical shape with horizontal axis as major axis /** *Elliptiese vorm met groter-as as die horisontale-as* **A** ✓ *x*-intercepts/ *x-afsnitte* **A** ✓ *y*-intercepts/*y-afsnitte* **A** (3)
2.2.2	Length of major axis/Lengte van lang-as = 5 – (- 5) = 10 units / *eenheid.*	✓ **10** **CA** (1)
		[11]
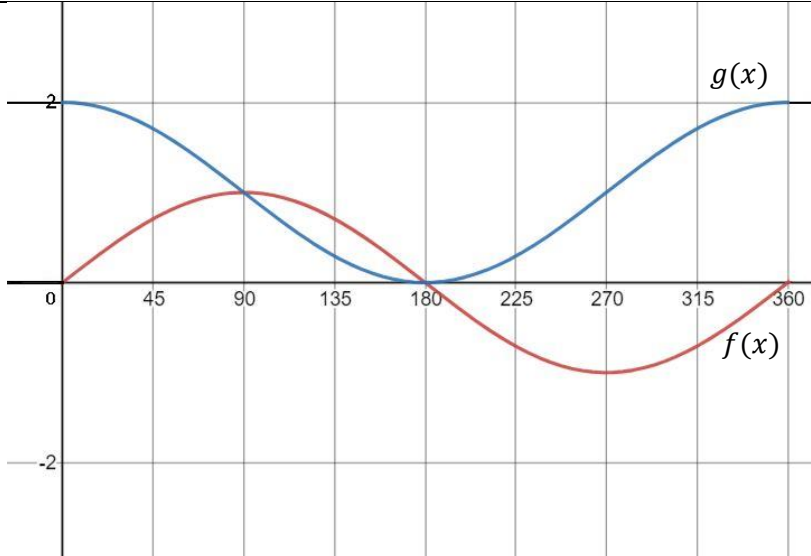
QUESTION/*VRAAG* **3**

3.1.1	$\text{Sin}(38,9°) + \cos2(153,2°)$ $= 1,22$	✓ **SF** **A** ✓ **1,22** **A** (2)
3.1.2	$\sec\left(\frac{38,9°}{3} + 153,2°\right)$ $= \frac{1}{\cos\left(\frac{38,9°}{3}+153,2°\right)}$ $= -1,03$	✓ **SF** **A** ✓ **reciprocal ratio /** *resiprook verh.* **A** ✓ **- 1,03** **A** (3)
3.2.1	 $\therefore \cos52° = \frac{1}{\sqrt{k^2+1}}$	✓**Diagram** **A** ✓$\sqrt{k^2+1}$ **A** ✓$\frac{1}{\sqrt{k^2+1}}$ **CA** (3)
3.2.2	$\csc38° = \sqrt{k^2+1}$	✓**answer/***antwoord* **A** (1)
3.2.3	$\sin232° = \sin(180° + 52°)$ $\sin232° = -\sin52°$ $\sin232° = \frac{-k}{\sqrt{k^2+1}}$	✓**Conv./***Herleiding* **A** ✓✓ **answer/***antw*. **A** (3)
3.3	$\frac{1}{2}\csc2\theta = 0,814$ $\csc2\theta = 1,628$ $\frac{1}{\sin2\theta} = 1,628$ $1 = 1,628 \times \sin2\theta$ $\frac{1}{1,628} = \sin2\theta$ $37,897...° = 2\theta$ $18,95° = \theta$	✓ **S** **A** ✓ $\frac{1}{\sin2\theta}$ **A** ✓ **S** **CA** ✓ **18,95° = θ** **CA** (4)
		[16]
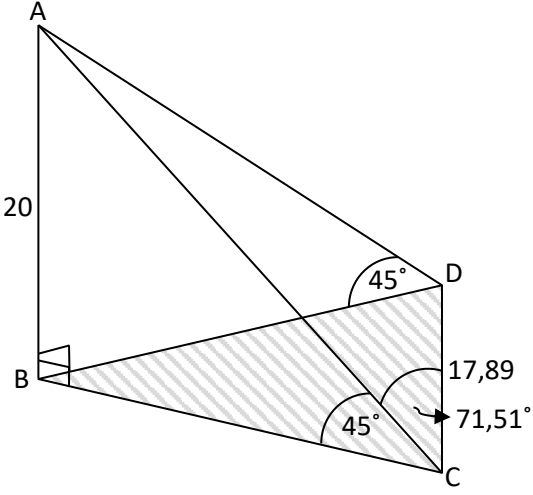
QUESTION/*VRAAG* 4

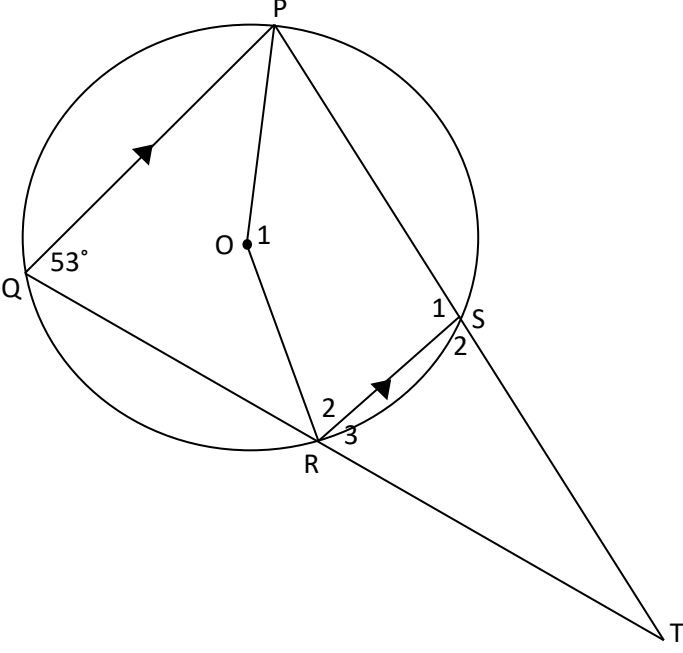| 4.1	$cosec^2\theta$	✓**Answer/***Antw.***A** (1)
4.2	$\dfrac{\cos(180°+\theta).\tan(360°-\theta).cos^2(360°-\theta)}{\sin(180°-\theta)} + cos^2\theta$ $= \dfrac{-cos\theta.-tan\theta.cos^2\theta}{\sin\theta} + cos^2\theta$ $= \dfrac{-cos\theta.-\frac{sin\theta}{cos\theta}.cos^2\theta}{\sin\theta} + cos^2\theta$ $= cos^2\theta + cos^2\theta$ $= 2cos^2\theta$	✓ $-cos\theta$ **A** ✓ $-tan\theta$ **A** ✓ $cos^2\theta$ **A** ✓ $\sin\theta$ **A** ✓ $\dfrac{sin\theta}{cos\theta}$ **A** ✓ **S** **A** ✓ $2cos^2\theta$ **CA** (7)
4.3	$LHS = \dfrac{sec\theta + cosec\theta}{sin\theta + cos\theta}$ $LHS = \dfrac{\frac{1}{cos\theta}+\frac{1}{sin\theta}}{sin\theta+cos\theta}$ $LHS = \dfrac{\frac{sin\theta+cos\theta}{cos\theta sin\theta}}{sin\theta+cos\theta}$ $LHS = \dfrac{sin\theta+cos\theta}{cos\theta sin\theta} \times \dfrac{1}{sin\theta+cos\theta}$ $LHS = \dfrac{1}{cos\theta sin\theta}$ $RHS = \dfrac{sin\theta}{cos\theta} + \dfrac{cos\theta}{sin\theta}$ $RHS = \dfrac{sin^2\theta + cos^2\theta}{cos\theta sin\theta}$ $RHS = \dfrac{1}{cos\theta sin\theta} = LHS$	✓ $\dfrac{1}{cos\theta}$ **A** ✓ $\dfrac{1}{sin\theta}$ **A** ✓ $\dfrac{sin\theta+cos\theta}{cos\theta sin\theta}$ **CA** ✓ $\dfrac{1}{cos\theta sin\theta}$ **CA** ✓ $sin^2\theta + cos^2\theta$ **CA** ✓ $cos\theta sin\theta$ **CA** ✓ **identity /** *identiteit* **A** ✓ $RHS = LHS$ **CA** (8)
		[16]

QUESTION/*VRAAG* 5

5.1		✓ start points/ *beginpunte* ✓ end points/*eindpunte* ✓ cos turning points/*cos draaipunte* ✓ cos x-intercepts/*cos x-afsnitte* ✓ sin turning points/*sin draaipunte* ✓ sin x-intercepts/*sin x-afsnitte* ✓Points of intersection/ *snypunte* (7)
5.2	$y \in [0; 2]$ **OR/ *OF*** $0 \le y \le 2$	✓ Notation/*Notasie* **A** ✓ start and endpoints/ *begin- en eindpunte* **CA** (2)
5.3	$360°$	✓ **Answer/*Antw.* A** (1)
5.4	$x = 90°$ and/*en* $x = 180°$	✓ $x = 90°$ **CA** ✓ $x = 180°$ **CA** (2)
		[12]

QUESTION/*VRAAG* 6

6.1	$sin45° = \frac{20}{AC}$ $AC \times sin45° = 20$ $AC = \frac{20}{sin45°}$ $AC = 20\sqrt{2}$	**OR/ OF**	$BC = 20$ (sides opp = $\angle$'s / *sye teenoor =* $\angle$'e) $AC = 20\sqrt{2}$ (Pyth)	✓ **SF** **A** ✓ answer/*antw* **CA** (2)
6.2	$AC = AD = 20\sqrt{2}$ $C\hat{A}D = 36,86°$ (Int. $\angle$s of Δ / *Binne* $\angle$'e van Δ) $\therefore Area\ \Delta ACD = \frac{1}{2}AD.AC.sinA\hat{C}D$ $\therefore Area\ \Delta ACD = \frac{1}{2}(20\sqrt{2})(20\sqrt{2}).sin36,86°$ $\therefore Area\ \Delta ACD = 239,94$ square units / *vierkante eenh.* **OR / *OF*** $Area\ \Delta ACD = \frac{1}{2}DC.AC.sinA\hat{C}D$ $\therefore Area\ \Delta ACD = \frac{1}{2}(17,89)(20\sqrt{2}).sin71,51°$ $\therefore Area\ \Delta ACD = 239,94$ square units / *vierkante eenh.*			✓ **F** **A** ✓ **SF** **CA** ✓ Answer/*Antw.* **A** (3)
				[5]
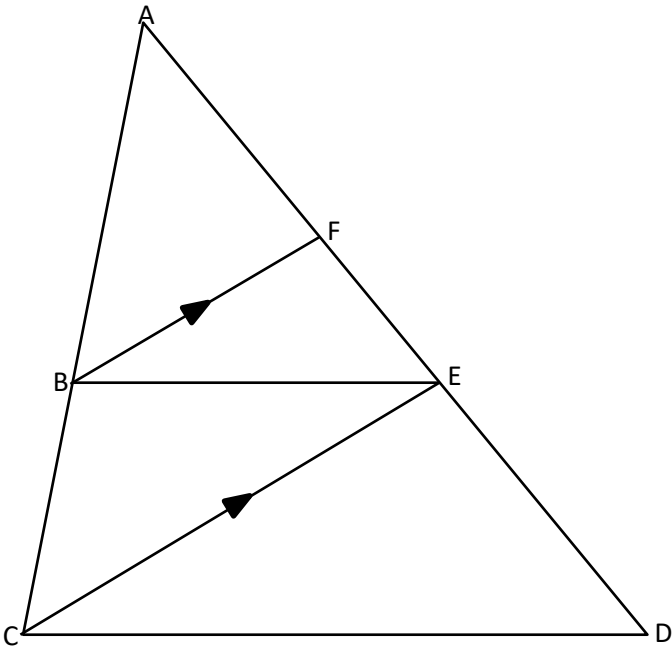
QUESTION/*VRAAG* 7

7.1	double/twice/*dubbel*/*twee keer*	✔	(1)
7.2			
7.2.1	$\widehat{O}_1 = 106°$ (∠ at centre = 2 x < at circumf. / ∠ *by middelpt.* = 2 x < *by omtrek*)	✔ ST ✔RE	(2)
7.2.2	$\widehat{S}_2 = 53°$ (Ext. ∠ of cq / *Buite* ∠ *van kvh*)	✔ ST ✔RE	(2)
7.2.3	$\widehat{P} = 53°$ (Corresp. ∠s = / *Ooreenkomst.* ∠*'e =;*QP‖SR)	✔ ST ✔RE	(2)
			[7]

QUESTION/_VRAAG_ 8

8.1	equal / _gelyk_	✔	(1)
8.2			
8.2.1	Tangents from same or common pt / _raaklyne vanuit dieselfde pt._	✔ **ST**	(1)
8.2.2	$\therefore \widehat{P_4} = \widehat{S_3}$ ($\angle$s opp = sides / $\angle$'e teenoor = sye) $\widehat{P_4} = \frac{180° - 80°}{2} = 50°$ (Int. $\angle$s of Δ / _Binne $\angle$'e van_	✔ **ST** ✔**RE** ✔ **ST** ✔**RE**	(4)
8.2.3 (a)	$\overset{\wedge}{P_2} = 50°$ (tan-chord / _raaklyn-koord_)	✔ **ST** ✔**RE**	(2)
8.2.3 (b)	$\overset{\wedge}{Q_3} = 50°$ (tan-chord / _raaklyn-koord_) $\therefore \overset{\wedge}{S_2} = 50°$ ($\angle$s opp = sides / $\angle$'e teenoor = sye)	✔ **ST / RE** ✔ **ST / RE**	(2)
8.2.3 (c)	$\overset{\wedge}{R_2} = 50°$ ....(alt/_verw_ $\angle$s/e; VQ ∥ RP) **OR/**_OF_ $\overset{\wedge}{R_2} = 50°$ ....($\angle$s in same segment / $\angle$e in dies segm)	✔**ST** ✔ **RE** **OR/**_OF_ ✔**ST** ✔ **RE**	(2)
8.2.3 (d)	$\overset{\wedge}{R_3} = 50°$ (tan-chord / _raaklyn-koord_) $\hat{V} = 50°$ ....(corresp/_ooreenk_ $\angle$s/e; VQ ∥ RP) **OR/**_OF_ (ext $\angle$ of Δ / _buite $\angle$ van Δ_)	✔ **ST / RE** ✔ **ST / RE**	(2)
			[14]
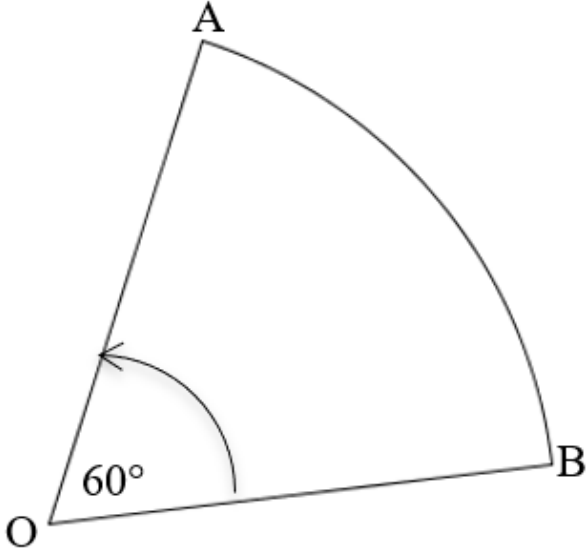
QUESTION/*VRAAG* 9

9.1	Parallel	✔ **A** (1)
9.2		
9.2.1	$\frac{AB}{AC} = \frac{AF}{AE}$ (line ∥ to 1 side of Δ / *lyn* ∥ *aan 1 sy van* Δ) $\frac{3}{4} = \frac{AF}{36}$ $\frac{3}{4} \times 36 = AF$ $27 = AF$	✔ **ST RE** ✔ **SF** ✔ **Answer /** *Antw.* (3)
9.2.2	$FE = AE - AF = 36 - 27 = 9$ $\therefore \frac{FE}{ED} = \frac{3}{4}$ $\therefore \frac{9}{ED} = \frac{3}{4}$ $\therefore 36 = 3ED$ $\therefore 12 = ED$	✔ **ST** ✔ **SF** ✔ **Answer /** *Antw.* (3)
9.3	In proportion / *is eweredig*	✔ (1)

9.4		

9.4.1	In ΔABF and/en ΔAEC:
	   1. $\hat{A} = \hat{A}$ (common $\angle$ / *gemene* $\angle$)
	   2. $\widehat{B_1} = \widehat{E_1}$ (ext. $\angle$ of cq / *buite* $\angle$ *van kvh*)
	   3. $\widehat{F_1} = \widehat{C_1}$ (ext. $\angle$ of cq / *buite* $\angle$ *van kvh*)
	$\therefore \Delta ABF \parallel\parallel\parallel \Delta AEC$ ($\angle\angle\angle$)
		✓✓ **ST RE**
		✓ **ST RE**
		
		✓ **RE**
		
		(4)

9.4.2 (a)	$\dfrac{AB}{AE} = \dfrac{BF}{EC} = \dfrac{AF}{AC}$ ($\Delta ABF \parallel\parallel\parallel \Delta AEC$) $\dfrac{25}{60} = \dfrac{BF}{EC} = \dfrac{20}{AC}$ $\dfrac{25}{60} = \dfrac{20}{AC}$ $25AC = 1200$ $AC = 48$ $\therefore BC = 48 - 25 = 23$	✓ **ST RE** ✓ **ST** ✓ **Answer /** *Antw.* (3)
9.4.2 (b)	$\dfrac{AB}{BF} = \dfrac{25}{23+27} = \dfrac{25}{50} = \dfrac{1}{2}$ $\dfrac{AF}{FE} = \dfrac{20}{40} = \dfrac{1}{2}$ $\therefore$ sides in proportion / *sye in verhouding* $\therefore$ BF $\parallel$ DE	✓ **ST** ✓ **ST** ✓ **Concl. /** *Afleid.* (3)

9.4.2
(c)
	In ΔAEC and ΔADE:
	   1. $\hat{A} = \hat{A}$ (common $\angle$ / *gemene* $\angle$)
	   2. $\widehat{B_1} = \widehat{C_1}$ (ext. $\angle$ of cq / *buite* $\angle$ *van kvh*)
	   3. $\widehat{B_1} = \hat{D}$ (Corresp. $\angle$'s = / *Ooreenkomst.* $\angle$'*e* =
	                 BF $\parallel$ DE)
	     $\widehat{C_1} = \hat{D}$
	     $\widehat{E_1} = A\hat{E}D$ (Int. $\angle$'s of Δ / *Binne* $\angle$'*e van* Δ)
	$\therefore \Delta AEC \parallel\parallel\parallel \Delta ADE$ ($\angle\angle\angle$)
		✓ **ST RE**
		✓ **ST RE**
		
		✓ **Answer /** *Antw.*
		(3)
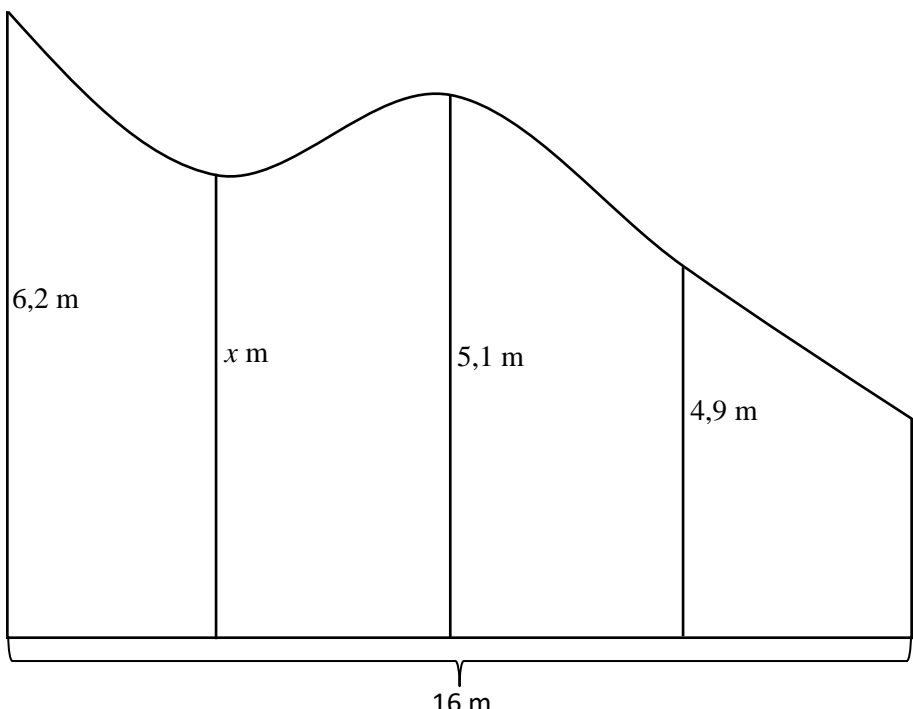
9.4.2 (d)	$\Delta AEC\,\|\|\,\Delta ADE\,\|\|\,\Delta ABF$ (proved / *bewys*) $\dfrac{AD}{AB}=\dfrac{DE}{BF}=\dfrac{AE}{AF}$ $\dfrac{75}{25}=\dfrac{DE}{BF}=\dfrac{60}{20}$ $\therefore 75:25 = DE:BF$ $\therefore 3:1 = DE:BF$	✓ **ST** ✓ **ST**
		(2)
		[23]
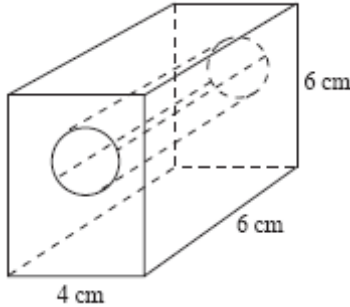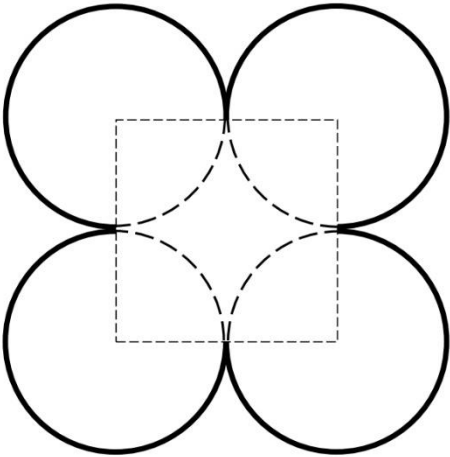
QUESTION/*VRAAG* 10

10.1		
10.1.1	$\theta = 60° \times \dfrac{\pi}{180°} = \dfrac{\pi}{3}\text{rad}$ $\therefore s = r\theta$ $\therefore s = 5\left(\dfrac{\pi}{3}\right)$ $\therefore s = \dfrac{5}{3}\pi$	✓ $\dfrac{\pi}{3}$ **A** ✓ **F** **A** ✓ **SF** **CA** ✓ $\dfrac{5}{3}\boldsymbol{\pi}$ **CA** (4)
10.1.2	Area $= \dfrac{r^2\theta}{2}$ Area $= \dfrac{(5)^2\left(\frac{\pi}{3}\right)}{2}$ Area $= \dfrac{25}{6}\pi$	✓ **F** **A** ✓ **SF** **CA** ✓ $\dfrac{25}{6}\pi$ **CA** (3)

10.2			
10.2.1	$\omega = 2\pi n$ $\omega = 2\pi(30)$ $\omega = 60\pi$ rad/s	1800 rev / min 1800 rev / 60 sec 30 rev / sec	✓ **Conv. /** *Herl.* **A** ✓ **F** **A** ✓ **SF** **CA** ✓ **60π** **CA** (4)
10.2.2	$v = \pi D n$ $v = \pi(0,42)(30)$ $v = \frac{63}{5}\pi$ m/s	$D = 420 \div 1000$ $\therefore D = 0,42$ m 1800 rev / min 1800 rev / 60 sec 30 rev / sec	✓ **Conv. /** *Herl.* **A** ✓ **F** **A** ✓ **SF** **CA** ✓ $\frac{63}{5}\pi$ **CA** (4)
10.2.3	$h^2 - 4dh + x^2 = 0$ $h^2 - 4(42)h + (25)^2 = 0$ $h^2 - 168h + 625 = 0$ $\therefore h = 164,19$ or / *of* $h = 3,81$ $\therefore US = 3,81$ cm	$250\ mm = 25\ cm$ $420\ mm = 42\ cm$	✓ **Conv. /** *Herlei* **A** ✓ **F** **A** ✓ **SF** **CA** ✓ **Both answers of h /** *Beide antw. vir h* **CA** ✓ $US = 3,81\ cm$ **CA** (5)
			[20]

QUESTION/*VRAAG* **11**

11.1

6,2 m

x m

5,1 m

4,9 m

2 m

16 m

$Area = a\left(\frac{O_1 + O_n}{2} + O_2 + O_3 + \ldots + O_{n-1}\right)$

$73,6 = 4\left(\frac{6,2+2}{2} + x + 5,1 + 4,9\right)$

$73,6 = 4(14,1 + x)$

$18,4 = 14,1 + x$

$4,3\, m = x$

<center>**OR/***OF*</center>

$Area = a(m_1 + m_2 + m_3 + \ldots + m_{n-1})$

$73,6 = 4\left(\frac{6,2+x}{2} + \frac{x+5,1}{2} + 5 + 3,45\right)$

$18,4 = \frac{11,3+2x}{2} + 8,45$

$9,95 = \frac{11,3+2x}{2}$

$19,9 = 11,3 + 2x$

$8,6 = 2x$

$4,3\, m = x$

$a = \frac{16}{4}$

$a = 4$

✓ **F**   **A**
✓ $\boldsymbol{a = 4}$ **A**
✓ **SF**   **CA**
✓ **S**   **CA**
✓ $\boldsymbol{4,3\, m = x}$ **CA**

<div align="right">(5)</div>

<center>**OR/***OF*</center>

✓ **F**   **A**
✓ $\boldsymbol{a = 4}$ **A**
✓ **SF**   **CA**
✓ **S**   **CA**
✓ $\boldsymbol{4,3\, m = x}$ **CA**

<div align="right">(5)</div>

11.2			
	$Vol. of\ block\ of\ wood = l \times b \times h$ $Vol. of\ block\ of\ wood = 4 \times 6 \times 6$ $Vol. of\ block\ of\ wood = 144\ cm^2$ $Vol. of\ cylinder = \pi r^2 h$ $Vol. of\ cylinder = \pi(0,75)^2(6)$ $Vol. of\ cylinder = 10,60\ cm^2$ $\therefore Vol. of\ remaining\ block = 144 - 10,60$ $\therefore Vol. of\ remaining\ block = 133,40\ cm^2$	$d = 1,5$ $\therefore r = 0,75$	✓**144 cm^2** **CA** ✓**10, 60 cm^2** **CA** ✓ **Method /** *Metode* ✓ **133, 40 cm^2** **CA** (4)
11.3			
	$circumference\ of\ a\ circle = 2\pi r$ $\therefore 200 = 2\pi r$ $\therefore \frac{200}{2\pi} = r$ $\therefore 31,83\ cm = r$ $dist. from\ centre\ of\ circle\ to\ midpt\ of\ poster = 21,21\ cm$ (Pyth) $\therefore total\ radius\ needed = 21,21 + 15 = 36,21\ cm$ $\therefore 36,21 > 31,83$ $\therefore$ The poster will not fit in the circular space on the wall / *Die plakkaat sal nie in die sirkelvormige spasie op die muur pas nie.*		✓ radius of wall space / *radius van muur spasie* ✓ Distance / *afstand* ✓ total radius / *totale radius* ✓ Answer / *Antw.* ✓ Concl. / *Afleid.*

	OR/*OF*	**OR/***OF*
	$circumference\ of\ a\ circle = 2\pi r$ $\therefore 200 = 2\pi r$ $\therefore \frac{200}{2\pi} = r$ $\therefore 31,83\ cm = r$ $Area\ of\ wall = \pi r^2$ $\therefore Area\ of\ wall = \pi(31,83)^2$ $\therefore Area\ of\ wall = 3183\ cm^2$ Minimum required dimensions /*minimum benodigde afmetings:* 60 by 60 $Area\ of\ poster = l \times b$ $\therefore Area\ of\ poster = 60 \times 60$ $\therefore Area\ of\ poster = 3600\ cm^2$ $\therefore$ The poster will not fit in the circular space on the wall / *Die plakkaat sal nie in die sirkelvormige spasie op die muur pas nie.*	✔ radius of wall space / *radius van muur spasie* ✔ Area of wall / *Area van muur* ✔ Dimension of poster / *Afmetings van plakkaat* ✔ Answer / *Antw.* ✔ Concl. / *Afleid.* (5)
		[14]
		TOTAL /*TOTAAL***: 150**