

SA's Leading Past Year

Exam Paper Portal



You have Downloaded, yet Another Great
Resource to assist you with your Studies 😊

Thank You for Supporting SA Exam Papers

Your Leading Past Year Exam Paper Resource Portal

Visit us @ www.saexampapers.co.za



**SA EXAM
PAPERS**

**NATIONAL
SENIOR CERTIFICATE/
NASIONALE
SENIOR SERTIFIKAAT**

GRADE/GRAAD 12

SEPTEMBER 2020

**TECHNICAL MATHEMATICS P1 MARKING GUIDELINE/
TEGNIJSE WISKUNDE V1 NASIENRIGLYN**

MARKS/PUNTE: 150

MARKING CODES / NASIENKODES	
A	Accuracy/ <i>Akkuraatheid</i>
AO	Answer only / <i>Slegs antwoord</i>
CA	Consistent accuracy / <i>Volgehoue akkuraatheid</i>
M	Method / <i>Metode</i>
R	Rounding / <i>Afronding</i>
NPR	No penalty for rounding / <i>Geen penalisering vir afronding</i>
NPU	No penalty for units omitted / <i>Geen penalisering vir weglating van eenhede nie</i>
S	Simplification / <i>Vereenvoudiging</i>
F	Correct formula / <i>Korrekte formule</i>
SF	Substitution in the correct formula / <i>Vervanging in die korrekte formule</i>

This marking guideline consists of 20 pages./
Hierdie nasienriglyn bestaan uit 20 bladsye.

NOTE:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out an attempt of a question and not redone the question, mark the crossed-out version.
- Consistent accuracy (CA) to be applied as indicated on the marking guideline.
- Assuming answers/values to solve a problem is NOT ACCEPTABLE.

LET WEL:

- Indien 'n kandidaat 'n vraag TWEE keer beantwoord, sien slegs die EERSTE poging na.
- Indien 'n kandidaat 'n poging kanselleer, maar nie die vraag herdoen nie, merk die gekanselleerde poging.
- Volgehoue akkuraatheid (CA) sal toegepas word soos op die nasienriglyne aangedui.
- Aanvaarding van antwoorde / waardes om 'n probleem op te los is ONAANVAARBAAR.

QUESTION/VRAAG 1					
1.1	1.1.1	$0 = (3x - 2)(x + 1)$ $x = \frac{2}{3}$ or / of $x = -1$	$\checkmark x = \frac{2}{3}$ $\checkmark x = -1$	A A	(2)
	1.1.2	$7x^2 + 9x - 4 = 0$ $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ $x = \frac{-(9) \pm \sqrt{(9)^2 - 4(7)(-4)}}{2(7)}$ $x = -1,64$ or / of $x = 0,35$ -1 MARK for incorrect rounding / -1 PUNT vir verkeerde afronding	$\checkmark$ Formula /Formule $\checkmark$ Substitution/Vervanging $\checkmark x = -1,64$ $\checkmark x = 0,35$	A CA R CA	(4)

1.1.3	$-6x^2 < 5x$ $-6x^2 - 5x < 0$ $x(6x+5) > 0$ Critical Values / Kritiese waardes : 0 and / en $-\frac{5}{6} = -0,83$ $x < -\frac{5}{6}$ or / of $0 < x$	✓ Factors/Substitution <i>Faktore/vervanging</i> M ✓ Both critical Values <i>Beide kritiese waardes</i> NPR ✓✓ Correct Notation for each interval <i>Korrekte notasie vir elke interval</i>	A CA CA CA	(4)
1.2	$x + 3y = 1 \dots\dots\dots(1)$ $2x^2 + 2y^2 = -5xy \dots\dots(2)$ $x = 1 - 3y \dots\dots\dots(3)$ $2(1-3y)^2 + 2y^2 = -5(1-3y)y$ $2(1-6y+9y^2) + 2y^2 = -5y+15y^2$ $2-12y+18y^2+2y^2+5y-15y^2=0$ $5y^2-7y+2=0$ $y = \frac{-(-7) \pm \sqrt{(-7)^2 - 4(5)(2)}}{2(5)}$ $y = 0,4$ or / of $y = 1$ $x = 1 - 3y$ $x = 1 - 3(0,4)$ or / of $x = 1 - 3(1)$ $x = -0,2$ or / of $x = -2$	✓ Equation/vergelyking 3 M ✓ Substitution/vervanging ✓ Simplification/ <i>Vereenvoudiging</i> ✓ Standard form/ <i>Standaardvorm</i> ✓ Substitution/vervanging ✓ Both y values / <i>Beide y-waardes</i> ✓ Both x values <i>Beide x-waardes</i> NPR	A CA S S SF CA CA	
OR/OF				

		$x + 3y = 1 \dots\dots\dots(1)$ $2x^2 + 2y^2 = -5xy \dots\dots(2)$ $y = \frac{1-x}{3} \dots\dots\dots(3)$ $2x^2 + 2\left(\frac{1-x}{3}\right)^2 = -5x\left(\frac{1-x}{3}\right)$ $2x^2 + 2\left(\frac{1-2x+x^2}{9}\right) = \frac{-5x+5x^2}{3}$ $18x^2 + 2 - 4x + 2x^2 = -15x + 15x^2$ $18x^2 - 15x^2 + 2x^2 - 4x + 15x + 2 = 0$ $5x^2 + 11x + 2 = 0$ $y = \frac{-(11) \pm \sqrt{(11)^2 - 4(5)(2)}}{2(5)}$ $x = -2 \text{ or / of } x = -0,2$ $y = \frac{1-x}{3}$ $y = \frac{1-(-2)}{3} \text{ or / of } y = \frac{1-(0,2)}{3}$ $y = 1 \text{ or / of } y = 0,4$			(7)
1.3	1.3.1	$5,425 \text{ rev / min} = \frac{5,425 \text{ rev}}{60 \text{ sec}}$ $5,425 \text{ rev / min} = 0,09 \text{ rev / sec}$	✓ 0,09 rev/sec	A	(1)
	1.3.2	$5,425 \text{ rev / min} = 9 \times 10^{-2} \text{ rev / sec}$	✓ $9 \times 10^{-2} \text{ rev / sec}$ NPU	CA	(1)
1.4		101111_2 $= 1 \times 2^5 + 0 \times 2^4 + 1 \times 2^3 + 1 \times 2^2 + 1 \times 2^1 + 1 \times 2^0$ $= 32 + 8 + 4 + 2 + 1 = 47$ AO: Full Marks/ Volpunte	✓ Method/Metode ✓ 47	A A	(2)
					[21]

QUESTION/VRAAG 2				
2.1	$-x^2 + 9x - 2 = 0$ $b^2 - 4ac = 9^2 - 4(-1)(-2)$ $b^2 - 4ac = 73$ Roots are real, irrational and unequal <i>Wortels is reël, irrasionaal en ongelyk</i>	✓ Substitution/Vervanging ✓ $\Delta = 73$ ✓ Nature of roots/Aard van die wortels	SF CA CA	(3)
2.2	$-x^2 + 9x - c = 0$ $b^2 - 4ac < 0$ $9^2 - 4(-1)(c) < 0$ $4c < -81$ $c < \frac{-81}{4}$	✓ $\Delta < 0$ ✓ Substitution/Vervanging ✓ $\frac{-81}{4}$ ✓ Correct notation / Korrekte notasie	A CA CA CA	(4)
				[7]

QUESTION/VRAAG 3					
3.1	3.1.1	$\frac{2.8^{n-2} + 3.8^{n+1}}{2^{3n-5}}$ $= \frac{2.2^{3(n-2)} + 3.2^{3(n+1)}}{2^{3n-5}}$ $= \frac{2.2^{3n-6} + 3.2^{3n+3}}{2^{3n-5}}$ $= \frac{2^{3n} (2.2^{-6} + 3.2^3)}{2^{3n} . 2^{-5}}$ $= \frac{1}{32} + 24$ $= \frac{1}{32}$ $= \left(\frac{1}{32} + 24 \right) 32$ $= 1 + 768$ $= 769$	✓ Prime bases/<i>Priem-grondtalle</i> ✓ Factorisation / <i>Faktorisering</i> ✓ Simplification/<i>Vereenvoudiging</i> ✓ Simplification/<i>Vereenvoudiging</i>	A CA CA CA	(4)
	3.1.2	$\sqrt[3]{(-27)x^6} + \sqrt{25x^4}$ $= \sqrt[3]{(-3)^3 x^6} + \sqrt{5^2 x^4}$ $= -3x^2 + 5x^2$ $= 2x^2$	✓ Prime bases/<i>Priem-grondtalle</i> ✓ Simplification/<i>Vereenvoudiging</i> ✓ Simplification/<i>Vereenvoudiging</i>	A CA CA	(3)
	3.1.3	$\log_2 32 \div 2 \log_5 25$ $= \frac{\log_2 2^5}{2 \log_5 5^2}$ $= \frac{5 \log_2 2}{2 \times 2 \log_5 5}$ $= \frac{5}{4}$	✓ Prime bases/<i>Priem-grondtalle</i> ✓ Log property/<i>wet</i> ✓ Simplification/<i>Vereenvoudiging</i>	A CA CA	(3)

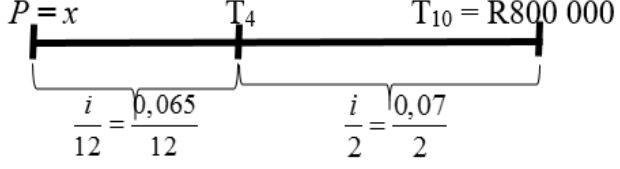
3.2	$\log_2(8x^3 - 1) - \log 100 = \log_2(4x^2 + 2x + 1)$ $\log_2(8x^3 - 1) - \log_2(4x^2 + 2x + 1) = \log 100$ $\log_2\left(\frac{8x^3 - 1}{4x^2 + 2x + 1}\right) = \log 100$ $\log_2\left(\frac{(2x - 1)(4x^2 + 2x + 1)}{4x^2 + 2x + 1}\right) = \log 10^2$ $\log_2(2x - 1) = 2 \log 10$ $\log_2(2x - 1) = 2$ $2^2 = 2x - 1$ $x = \frac{5}{2}$ OR/OF $\log_2(8x^3 - 1) - \log 100 = \log_2(4x^2 + 2x + 1)$ $\log_2(8x^3 - 1) - \log 10^2 = \log_2(4x^2 + 2x + 1)$ $\log_2(8x^3 - 1) - 2 = \log_2(4x^2 + 2x + 1)$ $\log_2(8x^3 - 1) - \log_2 4 = \log_2(4x^2 + 2x + 1)$ $\log_2\left(\frac{8x^3 - 1}{4}\right) = \log_2(4x^2 + 2x + 1)$ $\frac{8x^3 - 1}{4} = 4x^2 + 2x + 1$ $\frac{(2x - 1)(4x^2 + 2x + 1)}{4x^2 + 2x + 1} = 4$ $2x - 1 = 4$ $x = \frac{5}{2}$	✓ Log property/Wet ✓ Factors/Faktore ✓ Log property / wet ✓ Exponential form / Eksponensiale vorm ✓ Simplification/ Vereenvoudiging	A A A CA CA	(5)
-----	--	--	--	------------

3.3	$z = -3 + i\sqrt{3}$ $ z = \sqrt{(-3)^2 + (\sqrt{3})^2}$ $ z = \sqrt{12}$ $ z = 2\sqrt{3}$ $\tan \theta = \frac{\sqrt{3}}{3}$ $\theta = \tan^{-1}\left(\frac{\sqrt{3}}{3}\right)$ $\theta = 30^\circ$ (Reference Angle / Verw $\angle$) $\theta = 180^\circ - 30^\circ = 150^\circ$ $z = 2\sqrt{3}(\cos 150^\circ + i \sin 150^\circ)$	✓ Substitution/Vervanging ✓ Modulus ✓ tan ratio/verhouding ✓ Reference angle/ Verwysingshoek ✓ Polar form/Polêre vorm	A CA A CA CA	(5)
3.4	$\frac{y-i}{2-i} = 3xi$ $y-i = (3xi)(2-i)$ $y-i = 6xi - 3xi^2$ $y-i = 6xi - 3x(-1)$ $y-i = 3x + 6xi$ $y = 3x$ and / en $-1 = 6x$ $y = 3x$ and / en $x = -\frac{1}{6}$ $y = 3\left(-\frac{1}{6}\right)$ and / en $x = -\frac{1}{6}$ $y = -\frac{1}{2}$ and / en $x = -\frac{1}{6}$	✓ Simplification / Vereenvoudiging ✓ $i^2 = -1$ ✓ $x = -\frac{1}{6}$ ✓ $y = -\frac{1}{2}$	A CA CA CA	
OR/OF				

		$\frac{y-i}{2-i} \times \frac{2+i}{2+i} = 3xi$ $\frac{2y+yi-2i-i^2}{2^2-i^2} = 3xi$ $\frac{2y+yi-2i-(-1)}{4-(-1)} = 3xi$ $\frac{2y+1+(y-2)i}{5} = 3xi$ $2y+1+(y-2)i = 15xi$ $2y+1=0 \text{ and / en } y-2=15x$ $y = -\frac{1}{2} \text{ and / en } -\frac{1}{2}-2=15x$ $y = -\frac{1}{2} \text{ and / en } -\frac{5}{2} \div 15 = x$ $y = -\frac{1}{2} \text{ and / en } -\frac{1}{6} = x$	✓ Conjugate product / Toegevoegde produk ✓ $i^2 = -1$ ✓ $x = -\frac{1}{6}$ ✓ $y = -\frac{1}{2}$	A CA CA CA	(4) [24]
QUESTION/VRAAG 4					
4.1	4.1.1	$0 = -\frac{6}{x} + 2$ $\frac{6}{x} = 2$ $x = 3$	✓ Equating to 0 / Gelykstel aan 0 ✓ $x = 3$	A A S	(2)
	4.1.2	$0 = x^2 - x - 6$ $0 = (x-3)(x+2)$ $x = 3 \text{ or/of } x = -2$	✓ Factors/faktore ✓ $x = 3$ or/of ✓ $x = -2$	SF CA CA	(3)
	4.1.3	$y = -6$	✓ $y = -6$	A	(1)
	4.1.4	$x = 0 \text{ and/en } y = 2$	✓ $x = 0$ ✓ $y = 2$	A A	(2)

4.2	4.2.1	$r^2 = (0)^2 + (-2)^2 = 4$ $y = -\sqrt{4-x^2}$	$\checkmark r^2 = 4$ $\checkmark$ Equation / vergelyking	A CA	(2)
	4.2.2	$y = 2^x + q$ $-2 = 2^0 + q$ $-2 = 1 + q$ $\square q = -3$	$\checkmark$ SF $\checkmark q = -3$	A CA	(2)
	4.2.3	$y = 2^x - 3$ $0 = 2^x - 3$ $3 = 2^x$ $x = \log_2 3$ $x = 1,58$ $A(1,58;0)$	$\checkmark$ Substitution / vervangings SF $\checkmark$ Logarithm Property/wet $\checkmark 1,58$	A CA CA	(3)
	4.2.4	$y > -3$	$\checkmark y > -3$	A	(1)
[27]					

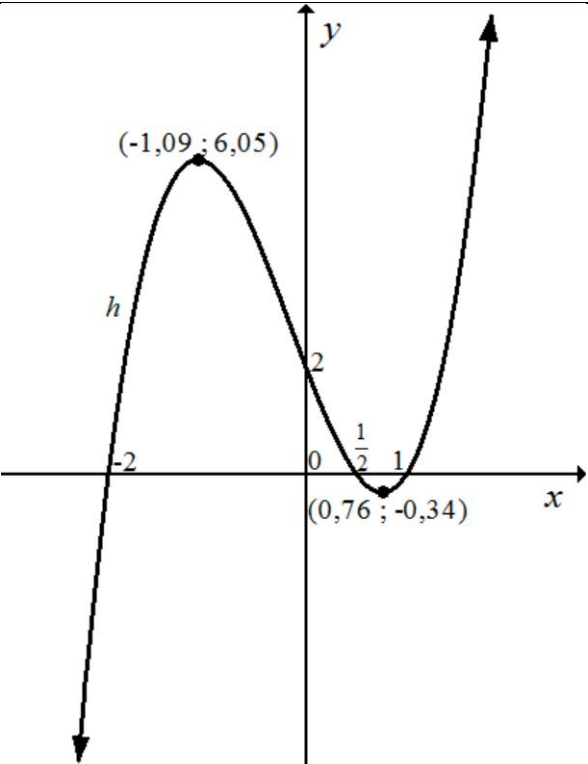
QUESTION/VRAAG 5					
5.1	Depreciation value = $\frac{8,8}{100} \times 800\,000 = R70\,400$ Verminderde waarde		✓ R729 600	A	(1)
	Current Asset value = $R800\,000 - R70\,400 = R729\,600$ Waarde van bate				
	OR / OF				
	Current Asset value = $91,2\% \times R800\,000 = R729\,600$ Waarde van bate		✓ R729 600	A	
5.2	5.2.1	Infected people / besmette mense = 9	✓ 9	A	(1)
	5.2.2	$A = P(1+i)^n$ $13 = 9(1+i)^7$ $\left(\frac{13}{9}\right)^{\frac{1}{7}} = 1+i$ $i = \left(\frac{13}{9}\right)^{\frac{1}{7}} - 1$ $i = 0,0539$ $\therefore$ Daily infection rate = 5,39% Daaglikse besmettingskoers	✓ Substitution/Vervanging <		

5.3	 $A_4 = P(1+i)^n$ $A_4 = P\left(1 + \frac{i}{12}\right)^{12n}$ $A_4 = x\left(1 + \frac{0,065}{12}\right)^{12 \times 4}$ $A = A_4\left(1 + \frac{i}{2}\right)^{2n}$ $800\,000 = x\left(1 + \frac{0,065}{12}\right)^{12 \times 4} \left(1 + \frac{0,07}{2}\right)^{2 \times 6}$ $x = \frac{800\,000}{\left(1 + \frac{0,065}{12}\right)^{12 \times 4} \left(1 + \frac{0,07}{2}\right)^{2 \times 6}}$ $\therefore x = \text{R}408\,501,77$	✓ Substitute/Vervang x SF ✓ Substitute i and n Vervang i en n SF ✓ Substitution/ Vervanging SF ✓ Simplification / Vereenvoudiging S ✓ R 408 501,77	A A CA CA CA	(5) [13]
-----	---	--	--	-------------------------------

QUESTION/VRAAG 6				
6.1	$f(x) = -\frac{1}{2}x + \pi$ $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$ $f'(x) = \lim_{h \rightarrow 0} \frac{-\frac{1}{2}(x+h) + \pi - \left(-\frac{1}{2}x + \pi\right)}{h}$ $f'(x) = \lim_{h \rightarrow 0} \frac{-\frac{1}{2}x - \frac{1}{2}h + \pi + \frac{1}{2}x - \pi}{h}$ $f'(x) = \lim_{h \rightarrow 0} \frac{-\frac{1}{2}h}{h}$ $f'(x) = \lim_{h \rightarrow 0} -\frac{1}{2}$ $\therefore f'(x) = -\frac{1}{2}$		✓ Definition/Definisie A ✓ Substitution / Vervanging SF A ✓ Simplification/ Vereenvoudiging S CA ✓ Simplification / Vereenvoudiging S CA ✓ $f'(x) = -\frac{1}{2}$ CA	(5)
6.2	6.2.1	$D_x \left(9\pi - \frac{14}{\sqrt{x}} \right)$ $D_x \left(9\pi - \frac{14}{x^{\frac{1}{2}}} \right)$ $D_x \left(9\pi - 14x^{-\frac{1}{2}} \right)$ $= 0 + \frac{14}{2} x^{-\frac{1}{2}-1}$ $= 7x^{-\frac{3}{2}}$	✓ Simplification/ Vereenvoudiging S A ✓ Simplification / Vereenvoudiging S A ✓ Derivative/Afgeleide CA	(3)

6.2.2	$2xy + x = x^{-9}$ $y = \frac{x^{-9} - x}{2x}$ $y = \frac{x^{-10}}{2} - \frac{1}{2}$ $\frac{dy}{dx} = \frac{-10x^{-11}}{2}$ $\therefore \frac{dy}{dx} = -5x^{-11}$	$\checkmark$ y Subject/Onderwerp $\checkmark \checkmark$ Simplification/ Vereenvoudiging S $\checkmark -5x^{-11}$	A CA CA CA	(4)
6.3	Average gradient = $\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$ Gemiddelde gradiënt = $\frac{-3}{-2 - x_1} = 1$ $-3 = -2 - x_1$ $\therefore x_1 = 1$ or / of Average gradient = $\frac{-3}{x_1 + 2} = 1$ $-3 = x_1 + 2$ $\therefore x_1 = -5$	$\checkmark$ Definition / definisie $\checkmark$ Substitution/ Vervanging $\checkmark 1$ $\checkmark -5$	A A CA CA	(4)
				[16]

QUESTION/VRAAG 7				
7.1	$y = 2$	$\checkmark 2$	A	(1)
7.2	$h\left(\frac{1}{2}\right) = 2\left(\frac{1}{2}\right)^3 + \left(\frac{1}{2}\right)^2 - 5\left(\frac{1}{2}\right) + 2 = 0$ Since/omdat $h\left(\frac{1}{2}\right) = 0$, then/dan $x = \frac{1}{2}$ is the x-intercept/ is die x-afsnit	$\checkmark h\left(\frac{1}{2}\right) = 0$ $\checkmark x = \frac{1}{2}$	A A	(2)
7.3	$\begin{array}{r rrrr} 1 & 2 & 1 & -5 & +2 \\ 2 & 0 & 1 & 1 & -2 \\ \hline & 2 & 2 & -4 & 0 \end{array}$ $(2x^2 + 2x - 4)\left(x - \frac{1}{2}\right) = 0$ $(2x - 2)(x + 2)\left(x - \frac{1}{2}\right) = 0$ $x = -2$ or / of $x = 1$	$\checkmark 2x^2 + 2x - 4$ $\checkmark (x + 2)(2x - 2)$ $\checkmark x = -2$ or/of $x = 1$	A CA CA	(3)
7.4	$h'(x) = 6x^2 + 2x - 5 = 0$ $x = \frac{-2 \pm \sqrt{4 - 4(6)(-5)}}{12}$ $x = -1,09$ or / of $x = 0,76$ $y = 2(-1,09)^3 + (-1,09)^2 - 5(-1,09) + 2 = 6,05$ or / of $y = 2(0,76)^3 + (0,76)^2 - 5(0,76) + 2 = -0,34$ $(-1,09; 6,05)$ and/en $(0,76; -0,34)$	$\checkmark h'(x) = 6x^2 + 2x - 5$ $\checkmark h'(x) = 0$ $\checkmark$ Substitution/Vervanging $\checkmark$ Both x values / Beide x-waardes $\checkmark$ Both y-values / Beide y-waardes	A A CA CA CA	(5)

7.5		✓ Shape/Vorm ✓ x-intercepts/afsnitte ✓ y- intercept/afsnit ✓✓ Turning Points/ Draaipunte	A CA CA CA	(5)
7.6	$h'(x) = 6x^2 + 2x - 5 = m_{\text{tangent/raaklyn}}$ $m_{\text{tangent/raaklyn}} = -5$ $y - y_1 = m(x - x_1)$ $y - 2 = -5(x - 0)$ $y = -5x + 2$	✓ $m_{\text{tangent/raaklyn}} = 6x^2 + 2x - 5$ ✓ $m_{\text{tangent/raaklyn}} = -5$ at/by $x = 0$ ✓ Substitution/Vervanging SF ✓ $y = -5x + 2$	A A CA CA	(4)
				[20]

QUESTION/VRAAG 8				
8.1	$S(t) = 3 + 6t - \frac{3}{4}t^2$ AO: FULL MARKS AO: VOLPUNTE Truck Height = $S(0) = 3 + 6(0) - \frac{3}{4}(0)^2$ <i>Trok hoogte = 3m</i>	✓ 3m	A	(1)
8.2	$S(t) = 3 + 6t - \frac{3}{4}t^2$ AO: FULL MARKS AO: VOLPUNTE $S(2) = 3 + 6(2) - \frac{3}{4}(2)^2$ $S(2) = 12m$	✓ Substitution/Vervanging ✓ 12 m	A CA	(2)
8.3	$S(t) = 3 + 6t - \frac{3}{4}t^2$ $S'(t) = 6 - \frac{3}{2}t$ $6 - \frac{3}{2}t = 0$ $t = 4s$	✓ $S'(t)$ ✓ $S'(t) = 0$ ✓ 4s	A A CA	(3)
8.4	Maximum Height = $S(4) = 3 + 6(4) - \frac{3}{4}(4)$ <i>Maksimum hoogte = 15m</i> No, maximum height that can be reached is 15m. <i>Nee, die maksimum hoogte behaalbaar is 15m</i>	✓ Substitution/Vervanging ✓ 15 m ✓ Conclusion/Gevolgtrekking ✓ Reason / Rede	A A CA CA	
OR/OF				

	$3 + 6t - \frac{3}{4}t^2 = 16$ $-13 + 6t - \frac{3}{4}t^2 = 0$ $t = \frac{-6 \pm \sqrt{(6)^2 - 4\left(-\frac{3}{4}\right)(-13)}}{2\left(-\frac{3}{4}\right)}$ $t = \text{Non-real / nie-reël}$ This indicates that it is not possible for the height of water ejected by the fire truck to reach 16 m, and so this truck is not suitable. <i>Dit dui aan dat dit nie moontlik is vir water om 16 m te bereik nie en dus is die brandblussertrok nie geskik daarvoor nie.</i>	✓ Equating to 16/ Gelykgestel aan 16 ✓ Non-real/nie-reël ✓ Conclusion/gevolgtrekking ✓ Reason/rede	A A CA CA	(4)
				[11]

QUESTION/VRAAG 9

9.1	9.1.1	$\int (y \sqrt[5]{x}) dx$ $= \int \left(y x^{\frac{1}{5}} \right) dx$ $= \frac{x^{\frac{1}{5}+1}}{\frac{1}{5}+1} y + c$ $= \frac{x^{\frac{6}{5}} y}{\frac{6}{5}} + c$ $= \frac{5x^{\frac{6}{5}} y}{6} + c$	✓ Exponential form / Eksponensiële vorm S ✓ c ✓ $\frac{5x^{\frac{6}{5}} y}{6}$	A A CA	(3)
	9.1.2	$\int \left(\frac{1}{x} - \frac{5}{x^2} \right) dx$ $\int \left(\frac{1}{x} - 5x^{-2} \right) dx$ $\ln x + 5x^{-1} + c$	✓ Fraction/Breuk S ✓ $\ln x$ ✓ $5x^{-1} + c$	A A CA	(3)

9.2	$\int_{-2}^0 (x^2 - 4) dx$ $= \left[\frac{x^3}{3} - 4x + c \right]_{-2}^0$ $= 0 - \left(\frac{(-2)^3}{3} - 4(-2) \right)$ $= - \left(-\frac{8}{3} + 8 \right)$ $\therefore \text{Area} = \frac{16}{3} \approx 5,33$	✓ Area notation/notasie ✓ Integral/Integraal ✓ Substitution/Vervanging ✓ Substitution/Vervanging ✓ Simplification/ Vereenvoudiging ✓ Correct value of the bounded area/ Korrekte waarde van die begrensde area	A A CA CA CA CA	(6)
		[12]		
		TOTAL/TOTAAL:		
		150		