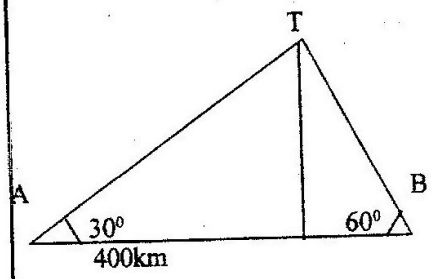
K.C.S.E 1997 MATHEMATICS PAPER 121/1 MARKING SCHEME

	SOLUTION	MARKS	ALTERNATIVE METHOD
1.	NO LOG 1934 3.2865 x 2 6.5730 + 0.0324 3.5105 ÷ 2 $\frac{4 + 4.5105}{2}$ 2.75525 5.32825- 436 2.63950 4.884 2.6888 = 488.4 OR 488.5✓	M1 M1 M1 A1 4	all ✓ logs Multiplication and division Addition and subtaction
2.	G.C.F. = XY^2✓ $Xy^2 (x^2 - 4y^2)$ ✓ $xy^2 (x - 2y) (x+2y)$ ✓	B1 B1 B1 3	
3.	SR=RQ .: < QRS = 55° <SQP = 550 ALT to <RSQ <STQ = 90° – 55° = 35° OR 180° – (90° + 55°) ✓ = 35°✓	B1B1 2	
4.	$\frac{ar^2}{a + ar} = \frac{16}{12} = \frac{4}{3}$ ✓ $3r^2 - 4r - 4 - 0$ $3r^2 - 6r - 2r - 4 = 0$✓ $(3r + 2) (r-2) = 0$ $r = \frac{-2}{3}$ or $r = 2$ $r = \frac{-2}{3}$ ✓	B1 M1 A1	

SOLUTION	MARKS	ALTERNATIVE METHOD
 X= 400 cos 60° = 200m H= 200 sin 60° H=200 x 0.8660 = 173.2 m	B1 M1 A1 3	For Sketch ALT. METHOD TAM 30° = h / 400 - x h = (400 - x) tan 30° tan 60° = h .: h = x tan 60° 1.732 x = 400 x 0.5574 - 65774x x = 230.96 / 2.3095 h = 230/96 x 1.7301 = 113.2m
6. Volume of the cone = $^1/_3$x $^{22}/_7$ x 7 x 7 x 18 ✓ = 924 cm^3 Let change in height be H Volume of water displaced = $\frac{22}{7}$ x 14 x 14 x H = 616 cm^2 Π x 14x14xH = $^1/_3$ Π x 7x7x18 H = $\frac{49 \times 6}{14 \times 14}$ = 1.5 ✓	M1 M1 M1 A1 4	
7. CR = $\frac{4000 \times 100}{24{,}000}$ = $1^2/_3$ or $^5/_3$% ✓ commission = $\frac{5}{3} \times \frac{98}{100} \times \frac{360{,}000}{100}$ ✓ = Sh. 5880 ✓	B1 B1 A1 * 3	Accept 5891, 5891.80 When logs are used

	SOLUTION	MARKS	ALTERNATIVE METHOD
8.	(a) Mode = 934 (b) take any no = a a = 934 – 9 = 925 (ii) $x = 925 + \frac{115}{20}$ x = 930.75	B1 B1 M1 A1 3	
9.	$\begin{pmatrix} 1 & 3 \\ 5 & 3 \end{pmatrix}\begin{pmatrix} 3 & 1 \\ 5 & -1 \end{pmatrix}\begin{pmatrix} 3 & 1 \\ 5 & -1 \end{pmatrix}\begin{pmatrix} p & 0 \\ 0 & q \end{pmatrix}$ 18 = 3P 5P = 30 P= 6 P = 6	B1 B1 B1 3	
10	. $\frac{dy}{dx} = 3ax^2 - 6x - 2$ $3ax^2 - 6x - 2 = 1$ 3a-6-2=7 at x = 1 3a = 15 a = 5	M1 M1 A1	
11.	$\sin\theta = \frac{4}{5}$ or -0.8 3rd Quadrant 180 + 53.13 = 233.13 4th Quadrant 360 - 53.5 = 306.87	B1 B1 B1 2	
12.	Let the buying price be x Profit = (1040 - x) Loss = (x-880) 1040 - x = 3(x - 880) 4x = 3680 x = Sh. 920	 B1 M1 A1 3	
13.	$y(cx^2 - a) = b - bx^2$ $bx^2(b+yc) = b + ya$ $x^2 = \frac{b+ya}{b+yc}$ $x = \sqrt{\frac{b+ya}{b+yc}}$	M1 M1 A1 3	

SOLUTION	MARKS	ALTERNATIVE METHOD
14. (a) $\frac{300}{t-1}$ (b) Speed of the bus = $\frac{500}{t-1}$ $\frac{500}{t-1} : \frac{300}{t-1} = 5:3$	B1 B1 A1 3	
15. Let the cost be sh c - cup s - spoons $3x + 4s = 324$ $5c - 2s = 228$ $15c + 20s = 1620$ $15 - 6s = 684$ $26s = 936$ $s = 36$ $c = 60$	M1 M1 A1	
16(a) $R = \frac{1}{0.000016} = \frac{1}{1.6} \times 10^5$ $= 62500$ (b) (1) Approximate value = $\frac{1}{0.00315 - 0.00313}$ $= \frac{1}{0.00002} = {}^1/_2 \times 10^5$ $= 50000$ (ii) Error = 62500 - 50000 = 12500	M1 A1 M1 A1 B1 3	

	SOLUTION	MARKS	ALTERNATIVE METHOD
17.	(a) (i) (0.8 x 1.2) + (1.2) x 2 + (0.8 x1 2) + 1/2 x 0.8 x 0.3 x2	M1	
	= 0.96 + 2.4 + 1.6 + 0.24 ✓ = 5.2 m^2 ✓	A1	
	(ii) 0.6 x 1.2 x 2 ✓ = 1.44 ✓	M1 M1	
	(b) 300 x 144 ✓ 350 x 5.2 = 432 + 1830 = Sh. 225^2 ✓	A1 M1	
	(c) 432 $(1.5)^2$ ✓ = Sh. 972 ✓	A1 8	
18.	(a) (i) 120 x 27 ✓ = 3240 ✓	M1 A1	
	(ii) 120 x 27 x 1.853 = 6003.72 km✓	M1	
	(b) Speed in km/h $\frac{6003.72}{120}$ = 50.031 km/h ✓✓	M1/A1	(c) ALT. METHOD θ x 60o cos 5o = 3240 M1 $\theta = \frac{32409}{60\cos 5^\circ}$
	(c) $\frac{\theta}{360} \times 2 \times \frac{22}{7}$ 6370 cos 5 = 6003.72 $\theta = \frac{6003.72 \times 360 \times 7}{2 \times 22 \times 6370 \cos 5}$ ✓ $= 54.19^0$ Position (5^oN . 99. 19^0 E)✓	A1 8	(50°N, 99.21°E) A1
20.			

x	-4	-3	-2	-1	0	-0.5	1	2	3	4	5
y	-14	-6	0	4	6	0.25	6	4	0	-6	-14

B1 for all values corect L1 B1 - should be correctly read from the table

Line graph : y=2-2x ✓ B1 - working be shown

(b) x=1 x = 4 ✓ B1

(c) $6 + x^2 - x = 2-2x$ B1

$x^2 - 3x - 4 = 0$ ✓ B1

Suitable scale

plotting

Smooth curve

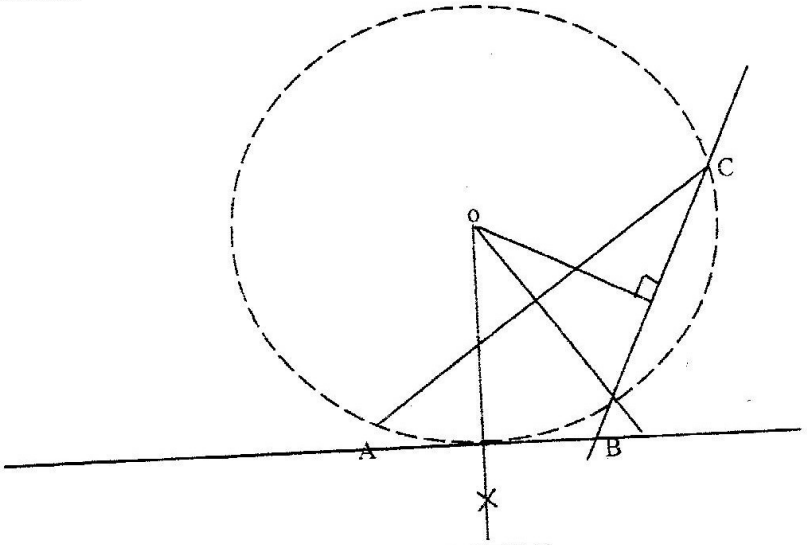
x = -1 or

SOLUTION	MARKS	ALTERNATIVE METHOD

19. Using a ruler and compasses only construct triangle ABC such that AB = 4 cm, BC = 5 cm and <ABC = 120°, measure AC.

On the diagram, construct a circle which passes through the vertices of the trangle ABC measure the radius of the circle.

Measure the shortest distance from the centre of the circle to the line BC = 5 cm and <ABC = 1200 measure AC.



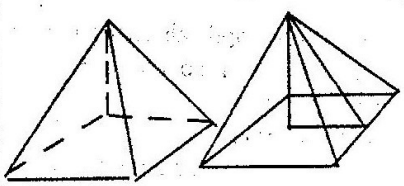
Constr. 60° /120°	B1
Complete D AB = 4 cm, BC = 5 cm	B1
Length of AC = 1.8 + 0.1 cm	B1
Bisectors /mediators	B1
Locating O	B1
Complete O drawn pasting through vertical A1B1C	B1
Radius 4.5 ± 0.1 cm	B1
Shortest distance 3.8 ± o.1 cm	B1

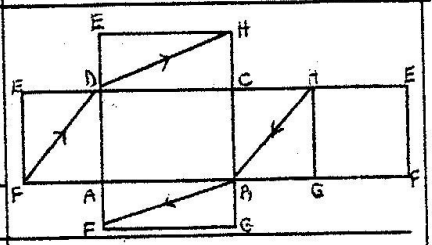
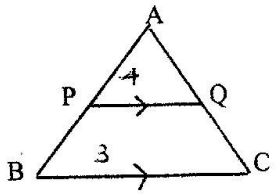
SOLUTION	MARKS	ALTERNATIVE METHOD
21.(a) 0.9 x 0.8 = 0.72 (b) 0.1 x 0.2 = 0.02 (c) 0.9 x 0.2 + 0.8 x 0.1 or (0.9 x 0.2 + (0.8 x 0.1) = 0.26 (d) 1-0.02 = 0.95	M1 A1 M1 A1 M1 A1 M1	
22. (a) (i) $\underline{AB} = \underline{OB} - \underline{OA} = \underline{b}-\underline{a}$ (ii) $\underline{CD} = \underline{CB} + \underline{BD}$ $= (\underline{a}-\underline{b}) + {}^{1}/_{2}\,\underline{b}$ ..... $= \underline{a} - {}^{2}/_{3}\,\underline{b}$..... (b) (i) $\underline{DE} = K\underline{CD}$ $= K(\underline{a} - {}^{2}/_{3}\,\underline{b})$ ..... (ii) In $\triangle$ ODE $\underline{OD} + \underline{DE} = \underline{OE}$ $4/3\,\underline{b} + K(\underline{a} - 2/3\,\underline{b} = \underline{a} + m\underline{a}$ $(4/3 - 2/3K)\underline{b} = 0$ $K = 2$ $K\underline{a} = \underline{a} + m\underline{a}$ $K = 1 + m$ $2 = 1 + m$ $m = 1$	B1 B1 B1 B1 M1 A1 M1 A1 8	
23. (a) $\pm 180^0$ rotation centre origin Matix M = $\begin{bmatrix}-1 & 0\\ 0 & -1\end{bmatrix}$ $\begin{bmatrix}a & b\\ c & d\end{bmatrix}\begin{bmatrix}2 & 4 & 4\\ 0 & 1 & 3\end{bmatrix} = \begin{bmatrix}-2 & 4 & 4\\ 0 & -1 & -3\end{bmatrix}$ $\begin{bmatrix}2a+0 & 4a+b & 4a+8b\\ 2c+0 & 4c+d & 4c+d\end{bmatrix} = \begin{bmatrix}-2 & 4 & 4\\ 0 & -1 & -3\end{bmatrix}$ $2a = -2$ $a = -1$ $4c + d = -1$ $d = -1$ $4a + h = 4$ $b = 4 - 4$ $b = 0$ $2c - 0 \quad c = 0$ $m\begin{bmatrix}1 & .0\\ 0 & .-1\end{bmatrix}$	B1 B1 B1 B1	

SOLUTION	MARKS	ALTERNATIVE METHOD
(b) $\begin{bmatrix}2 & 1\\1 & 1\end{bmatrix}\begin{bmatrix}2 & 4 & 4\\0 & 1 & 3\end{bmatrix}\ \begin{bmatrix}4 & 9 & 11\\2 & 5 & 7\end{bmatrix}$ $\begin{bmatrix}2\times2+0\\2\times1+0\end{bmatrix}\ \begin{bmatrix}2\times4+1\\1\times4+1\end{bmatrix}\ \begin{bmatrix}2\times4+3\\4+3\end{bmatrix}\begin{bmatrix}4 & 9 & 11\\2 & 5 & 7\end{bmatrix}$ A" (4.2) B" (9.5) C" (11.7)		
(c) Area of $\triangle$ ABC $= 1/2 \times 2 \times 2 = 2\ cm^2$✓ Determinant of $\begin{bmatrix}2 & 1\\1 & 1\end{bmatrix} = 2 - 1 = 1$✓ Area of $\triangle$ A" B" C" $= 1 \times 2 = 2\ cm^2$✓		
24. (a) OT $= 1\begin{bmatrix}1\\-2\end{bmatrix} + \frac{2}{3}\begin{bmatrix}4\\10\end{bmatrix} = \begin{bmatrix}3\\6\end{bmatrix}$ ✓ T [3,6]	M1 A1 2	
(b) Gradient PQ = 4 Gradient Normal $= {}^{-1}/_{4}$	M1 A1	
(ii) $\frac{y-6}{x-3} = {}^{-4}/_{4}$	B1	
$4(y-6) = (x-3)$ $4y - 24 = -x + 3$ $4y = -x + 27$	A1	
(iii) $(6\,{}^{3}/_{4} - 6)^2 \div (3-0)^2$ $= \sqrt{9.5625}$ $= 3.092$ $= 3.09$ (Sig. Fig) or 3.093	B1 A1	

K.C.S.E 1997 MATHEMATICS PAPER 121/2 MARKING SCHEME

SOLUTION	MARKS	ALTERNATIVE METHOD
1. $\frac{19 \times 32}{20 \times 38}$ $= 0.8 = \frac{4}{5}$	M1	for ✓ removal of decimal points or 0.032 and 0.0038 stated in standard form.
2. Let number of ten shillings coins be t .: number of five shillings coins $= 2t$ Number of one shilling coins $= 21 - 3t$ Value = $10t + 2t \times 5 + (21 - 30 \times 1 = 72$ $= 17t = 51$ $t = 3$	 B1 B1 M1 A1	ALT. METHOD Let number of 5-sh coins be f Number of 10 sh. coins be $\frac{1}{2}$ f Number of 1-sh coins - 21 $1\frac{1}{2}$f 1/2fx 10 +5ft(21-11/2f)x1=72 17f = 102 f = 6 .: no of 10 sh coins =3 A1
3. No. of yen $\frac{30000}{0.5446}$ $= 55086$	M1 A1 2	Allow 55080 from tables
4.✓Const. of ⊥bisector of BC ✓Const of ⊥bisector of AC or AB Locus of P drawn	B1 B1 B1 3	
5. Area of the sector = $\frac{75°}{360} \times \frac{22}{7} \times 14 \times 14$ $= 128.3$ cm Area of $\Delta = \frac{1}{2} \times 14 \times 14 \sin 75°$ $= \frac{1}{2} \times 14 \times 14 \times 0.9659$ $= (6,5)$ $= 94.64$ cm Area of segment = 128-94.64 $= 33.66$ or (33.68)LM	ml ml ml A1 4	 simplified expression or equivalent Simplify on P Subtract at simplified numerical stage stage and at least one area is correctly obtained.

SOLUTION	MARKS	ALTERNATIVE METHOD
6. Labelled sketch of the pyramid (dimensions may be implied) $VN = 10^2 + 3^2 = 109$ $= 10.44$ cm	B1 M1 A1 3	
7. $\left(\frac{1}{3^3}\right)^m \times (3^4) - 1 = 3^5$ or $3^{-3m} \times 3^{-4} \times 3^{-4} = 35$ $= -3m - 4 = 5$ $m = -3$	ml ml A1	For equivalent in power of 3 at least one index Alternative method $-\text{inlog } 27 - 1x \log 81 = \log 243$ $-mx\ 1.4314.1.9085 = 23856$ M1 $-m = \frac{4.2941}{1.4314}$ M1 $= -3.001$ A1
8. 3.55 ± 0.05, 4.85 ± 0.05, 5.7, 6.3, 6.7 & 6.9 Area = $1/2x1(0+7+2(3.6=4.9+5.7+6.3+6.7+6.9)$ $= {}^1/_2 x1\ (7+68.20)$ $= 37.6$	B1 M1 M1 A1 A1 4	for any 4 middle ordinates interval of ${}^1/_2$ MR-2 Use of formular all dividual trapezia area for simplification of inner brackets in a trapezoidal rule Mid ordinate rule use MR-2
9. $(1-3x)^5 = 1+5(-3x)+10(-3x)^2 + 10(-3x)^3$ $= 1-15x + 90x^2 - 270x^3 + \ldots\ldots$ $=3x = 0.03$ or $x = 0.1$ $(0.97)5=1-15(0.01)+90(0.01)^2-270(0.0)$ $= 1-0.15+0.009-0.00027$ $= 0.85873$ $= 0.8587$ to 4 d.p.	M1 A1 B1 M1 A1 5	For complete expansion to the expansion accept only to x3 incase of any (condone) error or $1+5t-0.03)+10(0.03)^2+10(-0.03)^3$

SOLUTION	MARKS	ALTERNATIVE METHOD
10. Any/drawn and labelled net of a net of a cuboid (condone net of a cube /path drawn All/directions (condone a net of cube award first B1. Diff net 12mm	B1 B1 B1 3	
11. (i) AQ : QC = 4:3 allow 8:6 (ii) QC = $\frac{3}{7}$ x 14 = 6 cm	B1 B1 2	
12. $\frac{\sqrt{14}(\sqrt{7}+\sqrt{2}) - \sqrt{14}(\sqrt{7}-\sqrt{2})}{(\sqrt{7}-\sqrt{2})(\sqrt{7}+\sqrt{2})}$ $= \frac{\sqrt{7}\sqrt{2} + \sqrt{2}\,7 - \sqrt{7}\sqrt{2} + 2\sqrt{7}}{7-2}$ $\frac{4\sqrt{7}}{5}$ $\therefore a = \frac{4}{5}$ b = 0	M1 M1 A1 A1 4	single term or write common 2 terms with common denominator expansion of both numerator & denominator
13. $\frac{48.4+56.25+50.3+49.0}{4}$ = 50.99 $\frac{56.25 + 50.3+49.0+45.6}{4}$ = 50.29 $\frac{50.3+49.0+45.6+57.65}{4}$ = 50.65	M1 M1 A1	for one moving average any expression for the other two moving average for 50.99, 50.29, 50.64

14. Let Onduso take x days
⇒ Mogaka takes x+5 days

$\therefore \frac{1}{x} + \frac{1}{x+5} = \frac{1}{6}$ — M1 or equivalent

$6(x+5)+6x = x(x+5)$ — M1 ✓ equivalent (removal of all denominators)

$x^2-7x-30=0$

$(x-10)(x+3)$ — M1

$x=10,-3$

$\therefore$ Onduso takes 10 days — A1 equivalent for factorization or use of formular.

4

15. Speed of slower athlete $= \frac{800}{108}$

$\therefore$ Distance $= \frac{800 \times 4}{108}$

$= 29.63$ — M1 A1

2

ALTE.METHOD

Slower speed $\frac{800}{108}$

Dist $800 - \frac{800 \times 104}{108}$

R.V $= \frac{800}{104} - \frac{800}{108}$

$= 0.2849$ $\therefore$ dis. $= 0.2849 \times 104 = 29.63$

16. (i) Area of Equi.$\Delta = \frac{1}{2} \times 6 \times 6 \sin 60^\circ$

$= \frac{1}{2} \times 6 \times 6 \times 0.8660$

$= 15.588 (15.59)$

X-section Area $= \frac{1}{2} \times 6 \times 6 \times 0.8660 \times 6$

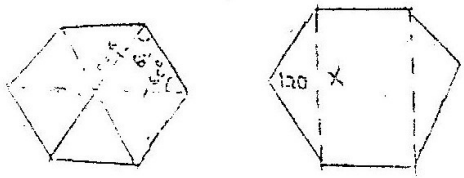
$= 15.59 \times 6$

$= 93.54 (93.528)$ — M1 A1

(ii) Vol. of prism $= 93.54 \times 30$

$= 2806.2 (2805.9)$ — M1 A1

5



ALT. METHOD

Area of Isos $\Delta = \frac{1}{2} \times 6 \times 6 \sin 120^\circ$

$= \frac{1}{2} \times 6 \times 6 \times 0.866$

$\frac{1}{2} \times 6 \times \sin 30^\circ = 15.57 \Rightarrow X = 10.39$

X-Sec area $= 15.59 \times 2 + 6 \times 10.39$

$= 93.52$ A1

Vol $= 93.52 \times 30$ M1

$= 2805.6$ A1 / 5

SECTION II (48 MARKS)

17. (a) (i) Vol=135x0.15=20.25m^3 — B1 for evaluation

(ii) mass=2500x20.25

=50625kg(50630) — B1 (✓)

=mass of cement=$50625 \times \frac{1}{9}$ — M1

=5625kg(5625.56) — A1

(b) Bags of cement= $\frac{5625}{50}$ — M1

112.5

113 — A1 (✓)

(c) No. of lorries of sand. $\frac{50625 \times 4}{7000 \quad 9}$ — M1

=3.214

≈ 4lorries. — A1 (✓)

8

18.

x	30	60	90	120	150	180	210	240	270	300	330	360
cosx	0.87		0	-0.5		-1.0		-0.5	0	0.5	0.87	1.0
2cos½x		1.73	1.41	1.0		0	0.52		1.41	1.73	1.93	

cosx ✓ row — B1 Allow 1d.p. Apply PA once

2cos½x row ✓ — B1 allow B1 for any 12 ✓

graph of cosx ✓ — B1 (✓) all points must be correctly

Graph of 2 cox½x ✓ — B1 (✓) plotted using given scale

for any error in fitting — Apply Ow-1 if scale not used.

table the graph drawn should have

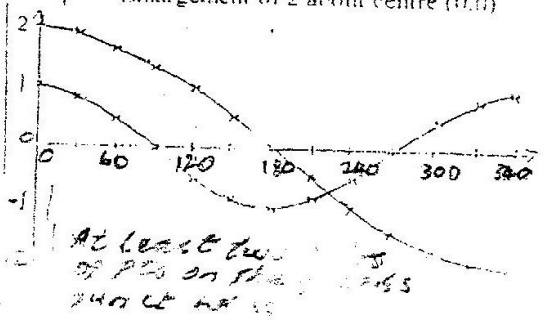
< that 2 points out) B1 ✓

period =720° — B1

Amlitute =2 — B1

Enlargement of 2 about centre (0,0) — B1

8



19. $x+y \leq 500$ B1

$y > x$ B1

$x \geq 200$ B1

(b) $x+y \leq 500$ drawn and shaded L1(✓) broken line

$y > x$ " " L1(✓)

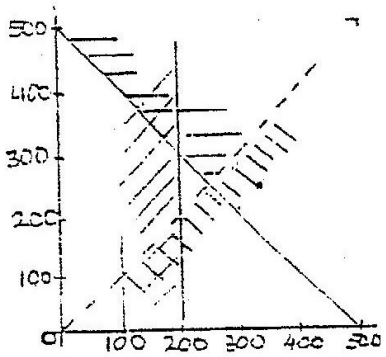
(c) (i) No. enrolled in technical=249
No " " " " =251 B1

(ii) max.profit

$249x2500+251x1000=873500$ B1

8

broken line



Allow Vs when inequality symbols are wrongly applied

20. (a) $\angle QTS = 40^0$ B1

$\angle S$ in alt. segment B1

(b) $\angle QRS = 10^0$ B1

Reasons: $\angle SQT = 90^0$ on semi-circle

$\Rightarrow \angle TSQ = 50^0$ B1

$\therefore \angle QRS = 50-40$ ext $\angle$ of Δ

(c) $\angle QVT = 35^0$ B1

Reasons: $\angle QVT = \angle SQV$, alt $\angle$s B1

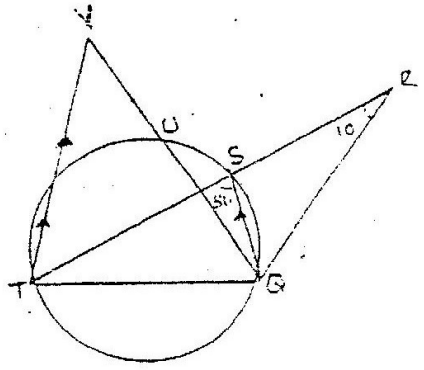
(d) $\angle UTV = 15^0$ B1

Reasons: $\angle QUT = \angle UTV + \angle QVT$

ext $\angle$ of Δ

$\therefore UTV = 50-35^0$ B1

8



21. (a) $V = k_1r^2 + k_2r^3$ B1

$k1+k2=54.6$

$4k1+8k2=226.8$ M1

$4k1+4k2=218.4$

$4k1+8k2=226.8$

$-4k2 = -8.4$ M_1

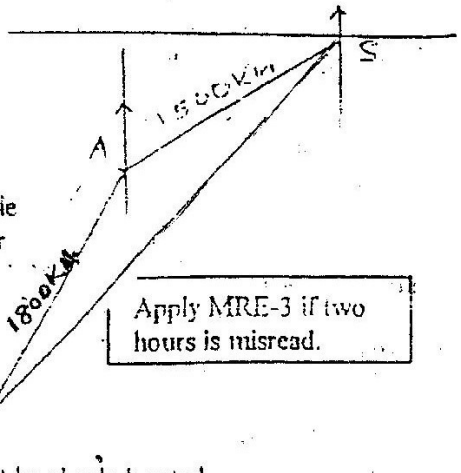
Must use different constants (or implied in the equation)

continuation 21. $\Rightarrow K_2 = 2.1$ and $k_1 = 52.5$		
$\therefore V = 52.5r^2 + 2.1r^3$	A1	
(b) $V = 52.5 \times 4^2 + 2.1 \times 4^3$	M1	
$= 52.5 \times 16 + 2.1 \times 64$		
$= 840 + 134.4$		
$= 974.4$	A1	(✓) if error is formed in determining the constants)
(c) $52.5r^2 = 2.1r^3$		
$(2.1r - 52.5)r^2 = 0$	M1	
$\Rightarrow r = 25$	A1	(✓) condone division of both sides by r^2
	8	

22.

class	14.5-18.5	18.5-22.5	22.5-26.5	26.5-30.5	30.5-34.5	34.5-38.5	38.5-42.5
frequency	2	3	10	14	13	6	2
c.freq	2	5	15	29	42	48	50

Cummulative frequencies	B1	
(a) Linear scale used	S1	Must accomodate all data(allow reading of varied scale.
plotting cf against upper class limit	P1	✓
Complete of cf curve drawn	C1	Allow curves from cf against mid-points lower class limits upper class limits boundaries.
(b) (i) median =29.5	B1	(✓) accept readings at cf= 25.0 0r 25½ within 1 small square
(ii) Reading at mass 25.28 =11 and 20. Probability= $\frac{20-11}{20}$ =0.8	B1 A1 8	(✓) Alloow the two Vs above for reading from cf curves.

3. (a) Bearing of 060^0 ✓ drawn	B1	
bearing of 210^0 ✓ drawn	B1	
Distance on scale drawing representing 1500 km	B1	either actual distance/scale is stated or or implied.
representing 1800 km	B1	
		Apply MRE-3 if two hours is misread.
b (I) Actual distaance		
$(16 \pm 0.1) \times 200$ or equivalent	M1	S or T must be clearly located
=3200 km	A1	
(ii) Bearing of T from S		
$=224^0 \pm 1^0$	B1	(✓)
(iii) Bearing of S from T		Apply ✓ if S or T is correctly located.
$= 044^0 \pm 1^0$	B1	(✓)

24.	(a) a+b, a+8d, a+24d	B1	All the 3 terms written. Allow the terms in the form a+(n-1)d
	(b) $\frac{a+8d}{a+2d} = \frac{a+24d}{a+8d}$	M1	
	$a^2+16ad+64d^2 = a^2+26ad+48d^2$		
	$16d^2 = 10ad$		
	$d(16d-10a) = 0$		
	$\Rightarrow d = \frac{5}{8}a$	M1	condone $16d=10a$
	$2(a+5d)+(a+6d) = 78$	M1	
	$3a+16d=78$		
	$3a+16\times\frac{5}{8}a = 78$	M1	for the formation of equ in one variable.
	$13a = 78$		
	$\Rightarrow a = 6$	A1	
	$d = \frac{5}{8} \times 6 = 3.75$		
	(ii) $S_9 = \frac{9}{2}\{2\times6 + (9-1)\frac{15}{4}\}$	M1	
	$= \frac{9}{2} \times 42$		
	$= 189.$	A1	✓ Only from an error numerical either a list.
		8	