

MARKING GUIDE MATHEMATICS

x/82

S1
NOV 13

SECTION A (40 marks)

Pelw 1. I

$$\begin{array}{cccccc} 6 & 9 & 5 & 10 & 4 & 11 & 3 \\ \vee & \vee & \vee & \vee & \vee & \vee & \vee \\ +3 & -4 & +5 & -6 & +7 & -8 & +9 \\ \hline \end{array}$$
c or e out

Ad 4. 04

$$\frac{1}{3}(5x-7) = 1+x$$

Pelw 2. I

$$1\frac{3}{5} - \frac{7}{8} \times (\frac{6}{7} + \frac{1}{2})$$

$$= \frac{8}{5} - \frac{7}{8} \times (\frac{6}{7} + \frac{1}{2})$$

$$= \frac{8}{5} - \frac{7}{8} \times \frac{12+7}{14} \quad \text{M}_1 \text{ Addition}$$

$$= \frac{8}{5} - \frac{7}{8} \times \frac{19}{14} \quad \text{M}_1 \text{ multiply}$$

$$= \frac{8}{5} - \frac{19}{16} \quad \text{L}_1$$

$$= \frac{128-95}{80} \quad \text{M}_1 \text{ (subtraction)}$$

$$= \frac{33}{80} \quad \text{A}_1$$

04

$$3 \times \frac{1}{3}(5x-7) = (1+x) \times 3 \quad \text{M}_1$$

$$5x-7 = 3+3x$$

$$5x-3x = 3+7 \quad \text{M}_1$$

$$\frac{2x}{2} = \frac{10}{2} \quad \text{M}_1$$

$$x = 5 \quad \text{A}_1$$

04

Accept other answers

Ad 3. I
 1.25151... as a fraction:
 Let the fraction be x.

$$x = 1.25151\dots$$

$$1000x = 1251.5151\dots \quad \text{A}_1$$

$$-10x = -12.5151\dots \quad \text{M}_1 \text{ (sub)}$$

$$990x = 1239 \quad \text{A}_1$$

$$\frac{990x}{990} = \frac{1239}{990}$$

$$x = \frac{413}{330}$$

L 6. I
 (1,4) and (3,2)

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{2-4}{3-1} \quad \text{M}_1$$

$$= -\frac{2}{2} \quad \text{A}_1 \quad m = -\frac{1}{2}$$

To find c: $y = mx + c$
 (3,2): $2 = -\frac{1}{2} \times 3 + c \quad \text{M}_1$

$$2 \times 2 = -\frac{3}{2} + c \times 2$$

$$4 = -3 + 2c$$

11.12
 12.08
 13.10
 14.12

 42

04

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$$4+3 = 2c$$

$$\frac{7}{2} = \frac{2c}{2}$$

$$c = \frac{7}{2}$$

$$\Rightarrow y = -\frac{1}{2}x + \frac{7}{2} \quad A_1$$

$$\text{or } 2y = 7 - x$$

04

L7.

$$\frac{7 \cdot 34 \times 100 \cdot 1}{21 \cdot 29} \approx \frac{7 \times 200}{2 \times 10}$$

$$\frac{10 \times 200}{20}$$

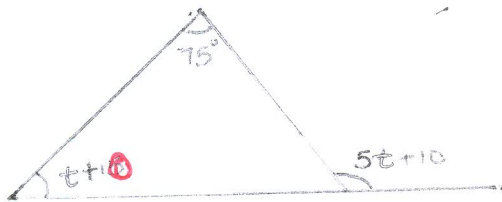
$$\approx \frac{7 \times 200}{20}$$

$$\approx 100$$

$$\approx 70 \quad B_1$$

04

EM8.



EM

10/16

On graph paper

$$y = 2x - 3$$

x	-1	0	2
y	-5	-3	1

B_1 (any two points)

Points:

- $(-1, -5) \quad (0, -3) \quad (2, 1)$

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One exterior angle is equal to the sum of two opposite interior angles.

$$75 + t + 10 = 5t + 10 \quad M_1$$

$$85 + t = 5t + 10$$

$$85 - 10 = 5t - t \quad M_1 \text{ Collecting like terms}$$

$$\frac{75}{4} = \frac{4t}{4}$$

$$t = 20 \quad A_1$$

$$\text{or } t = 21 \frac{1}{4} \text{ or } 21.25$$

$$t = 18 \frac{3}{4} \text{ or } 18.75$$

EM9.

28, 32 and 48

	28	32	48
2	14	16	24
2	7	8	12
2	7	4	6
2	7	2	3
3	7	1	3
7	7	1	1
1	1	1	1

trying
M₁ B₁ - all

$$\text{LCM} = 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 7 \quad M_1$$

$$= 672$$

672 books should be provided.

04

