

Standard Grade Maths 2006
General Paper 2 SOLUTIONS

KO RE

① Cost for 7 nights = 825 Each additional night = 72
Total cost = 825 + 5 × 72
= 1185

3

②

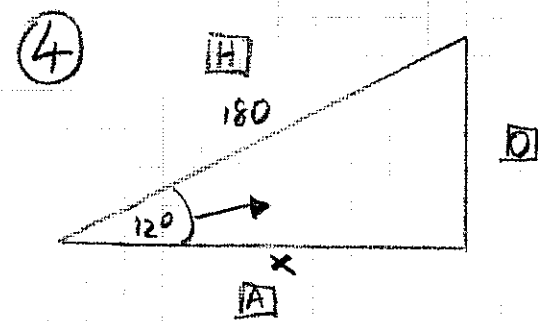
<u>Time (mins)</u>	→	<u>Pages</u>
7	→	63
1	→	$63 \div 7 = 9$
30	→	$9 \times 30 = \underline{\underline{270}}$

3

③

Number of darts scoring 5 points	Number of darts scoring 3 points	Number of darts scoring 2 points	Number of darts scoring 0 points	Total points
4	2	0	0	26
4	1	1	0	25
5	1	0	0	28
5	0	1	0	27
5	0	0	1	25
6	0	0	0	30

4



SOH - ~~CAH~~ - TOA

$$\cos 12^\circ = \frac{A}{H}$$

$$\cos 12^\circ = \frac{x}{180}$$

$$x = 180 \cos 12^\circ$$

$$x = \underline{\underline{176.1 \text{ cm}}} \text{ to 1 d.p.}$$

4

$$\textcircled{5} \quad \text{Weekday pay} = £5.60 \times 54$$

$$= £302.40$$

$$\text{Double time pay} = £436.80 - £302.40$$

$$= £134.40$$

$$\text{Double time hours} = £134.40 \div \overset{\text{'double time rate'}}{11.2}$$

$$= \underline{\underline{12}}$$

$$\textcircled{6} \text{ (a)} \quad 6a + 15b = 3(2a + 5b)$$

2

$$\text{(b)} \quad 4x - 3 = x + 21$$

$$3x - 3 = 21$$

$$3x = 24$$

$$\underline{\underline{x = 8}}$$

3

$\textcircled{7}$ Amy

Brian

$$D = 80 \text{ km}$$

$$S = ?$$

$$T = 1.5 \text{ hours}$$

$$= \text{1 hr 30 mins}$$

$$D = 80 \text{ km}$$

$$S = 60 \text{ km/h}$$

$$T = ?$$

$$T = \frac{D}{S}$$

$$= \frac{80}{60}$$

$$= 1 \frac{1}{3} \text{ hours}$$

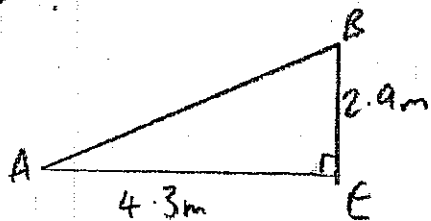
$$= \text{1 hr 20 mins}$$

Difference in journey times

→ Brian's takes 10 mins less

4

8



By Pythagoras

$$AB^2 = AE^2 + BE^2$$

$$AB^2 = (4.3)^2 + (2.9)^2$$

$$AB^2 = 26.9$$

$$AB = \sqrt{26.9}$$

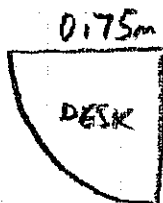
$$AB = 5.1865 \dots$$

$$\begin{aligned} \text{Perimeter} &= 4 \times AB \\ &= 4 \times 5.1865 \dots \\ &= \underline{\underline{20.7m}} \text{ correct to 1 d.p.} \end{aligned}$$

KU RE

4

9 (a)



$$\begin{aligned} \text{Area of desk} &= \frac{1}{4} \pi r^2 \\ &= \frac{1}{4} \times \pi \times (0.75)^2 \end{aligned}$$

$$= \underline{\underline{0.44m^2}} \text{ 2dp. } 2$$

- (b) One covering = $0.44m^2$
 \Rightarrow Two coverings = $0.88m^2$
 \Rightarrow Three coverings = $1.32m^2$ TOO MUCH

He could paint the top of his desk twice.

2

10 (a) Cost = $3 \times \underset{\text{FULL DAY}}{\pounds 28} + 2 \times \underset{\text{HALF DAY}}{\pounds 15}$
 $= \underline{\underline{\pounds 114}}$

2

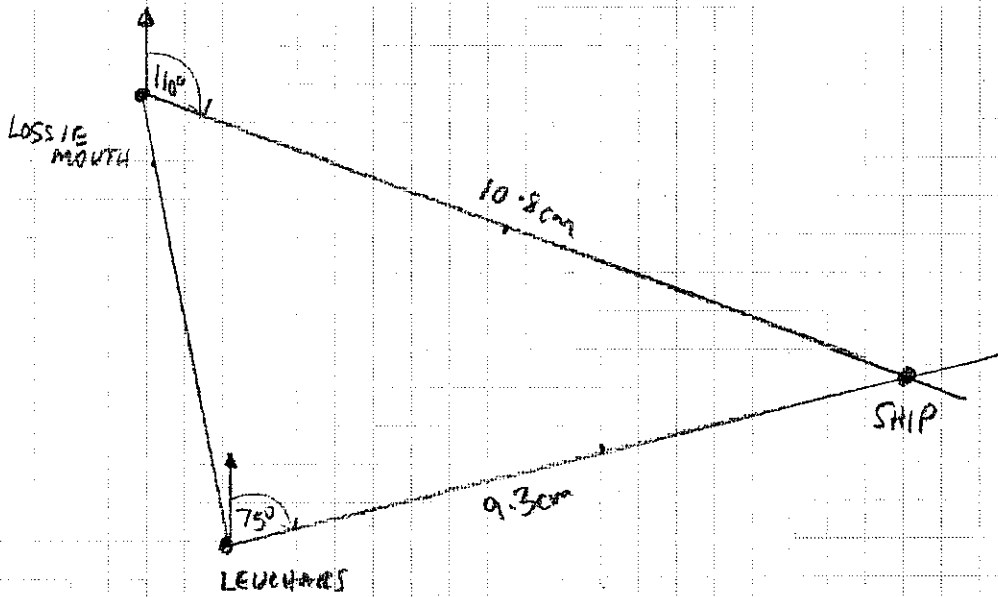
(b) Total number of hours = $3 \times \underset{\text{M,T,W}}{6} + 2 \times \underset{\text{T,H,F}}{3}$
 $= 18 + 6 = \underline{\underline{24}}$

New cost = $24 \times \pounds 5 = \underline{\underline{\pounds 120}}$

She won't save money with the new rate - it will be $\pounds 6$ dearer.

3

11



3

12) New customer discount = $\frac{1}{5}$ of £765
 = £765 ÷ 5
 = £153.

'Cash' Price = £765 - £153
 = £612

* Additional 8% for monthly installments
 Price to pay = £612 × 1.08 (or work out 8% of £612 and add on...)
 = £660.96

⇒ 12 months = £660.96
 1 month = £660.96 ÷ 12
 = £55.08

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