

Qu	Give one mark for each •	Illustrations for awarding mark
1a	ans : 10 hours 45 mins 2 marks <ul style="list-style-type: none"> •¹ finds time to midnight •² adds time next day 	<ul style="list-style-type: none"> •¹ 1 hour 10 minutes •² 10 hours 45 minutes
1b	ans: 62.3 km/h 4 marks <ul style="list-style-type: none"> •¹ knows how to find speed •² uses correct fraction for time •³ answer •⁴ correct rounding 	<ul style="list-style-type: none"> •¹ $S = D/T$ •² $S = 670/10 \cdot 75$ •³ 62.32558..... •⁴ 62.3 km/h
2	ans : 5.477 3 marks <ul style="list-style-type: none"> •¹ substitutes values •² starts to evaluate •³ final answer 	<ul style="list-style-type: none"> •¹ $T = 2\sqrt{\frac{75}{10}}$ •² $T = 2 \times \sqrt{7 \cdot 5}$ •³ 5.477
3	ans : $x = 4$ 3 marks <ul style="list-style-type: none"> •¹ subtracts $8x$ from both sides •² adds 11 to both sides •³ answer 	<ul style="list-style-type: none"> •¹ $4x - 11 = 5$ •² $4x = 16$ •³ $x = 4$
4a	ans : £22.55 2 marks <ul style="list-style-type: none"> •¹ knows how to find premium •² answer 	<ul style="list-style-type: none"> •¹ $20.5 \times \text{£}1.10$ •² £22.55
4b	ans: £34.44 3 marks <ul style="list-style-type: none"> •¹ finds new monthly premium •² finds difference in monthly premiums •³ knows to multiply by 12 	<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <ul style="list-style-type: none"> •¹ $20.5 \times \text{£}1.24 = \text{£}25.42$ •² $\text{£}25.42 - \text{£}22.55 = \text{£}2.87$ •³ $\text{£}2.87 \times 12 = \text{£}34.44$ </div> <div style="width: 35%; text-align: right;"> <p><u>alternative</u></p> <ul style="list-style-type: none"> •¹ $1.24 - 1.10 = 0.14$ •² $0.14 \times 20.5 = 2.87$ </div> </div>
5	ans : 21.5 metres 4 marks <ul style="list-style-type: none"> •¹ assembles facts in right triangle •² knows to use Pythagoras' •³ finds unknown length •⁴ finds perimeter 	<div style="text-align: center;"> </div> <ul style="list-style-type: none"> •¹ 1.8m •² $1.8^2 + 6^2$ •³ $\sqrt{39.24} = 6.3$ •⁴ $5.5 + 6 + 3 \cdot 7 + 6 \cdot 3 = 21.5 \text{ m}$
6	ans : 45.3% 4 marks <ul style="list-style-type: none"> •¹ finds loss •² knows to express loss as fraction of 8400 •³ knows to multiply by 100% •⁴ carries out all calculations correctly 	<ul style="list-style-type: none"> •¹ $\text{£}8400 - \text{£}4595 = \text{£}3805$ •² $3805 / 8400 \dots\dots$ •³ $\dots\dots \times 100\%$ •⁴ 45.3% [ignore rounding]

Qu	Give one mark for each •	Illustrations for awarding mark
7	ans : 42° 4 marks • ¹ knows to use SOH CAH TOA • ² chooses correct ratio • ³ finds ratio • ⁴ takes inverse to find angle	• ¹ evidence • ² $\sin = \dots\dots\dots$ • ³ $\dots\dots\dots = 2.9/4.3$ • ⁴ 42°
8a	ans : 25.3 3 marks • ¹ finds total • ² knows to divide by 9 • ³ answer	• ¹ 228 • ² $228 \div 9$ • ³ 25.3 [ignore rounding]
8b	ans: 18 2 marks • ¹ orders numbers • ² finds median ans: below the mean 1 mark • ¹ comment consistent with answers	• ¹ 12 14 15 18 18 18 22 50 61 • ² median = 18 • ¹ median is below the mean
9	ans: 70 Euros 2 marks • ¹ knows to multiply • ² answer	• ¹ 56×1.25 • ² 70 Euros
10a	ans : 7.9 m 4 marks • ¹ knows to use trig ratio • ² chooses correct ratio • ³ substitutes values • ⁴ answer	• ¹ evidence (SOH, CAH, TOA) • ² $\tan = O/A$ • ³ $\tan 25^\circ = h/17$ • ⁴ $h = 17 \times \tan 25^\circ = 7.9 \text{ m}$
10b	ans: 70 cm 4 marks • ¹ knows to find height for 23° • ² finds height • ³ finds difference in height • ⁴ changes to required unit	• ¹ evidence of strategy • ² $h = 17 \times \tan 23^\circ = 7.2 \text{ m}$ • ³ $7.9 - 7.2 = 0.7 \text{ m}$ • ⁴ 70 cm
11	ans : 2711 cm^2 5 marks • ¹ finds height of triangle • ² finds area of triangle • ³ uses correct radius • ⁴ finds area of semicircle • ⁵ knows how to find area of sign	• ¹ $85 - 27 = 58\text{cm}$ • ² $A_{tri} = \frac{1}{2} \times 58 \times 54 = 1566 \text{ cm}^2$ • ³ radius of semicircle is 27cm • ⁴ $A_{sc} = \frac{1}{2} \times \pi \times 27^2 = 1145 \text{ cm}^2$ • ⁵ Area of triangle + area of semicircle = 2711 cm^2
		Total 50 marks