

	Give 1 mark for each •	Illustration(s) for awarding each mark
1	<p>ans: 4.64 2 KU</p> <ul style="list-style-type: none"> •¹ know order of calculations •² carry out calculations 	<ul style="list-style-type: none"> •¹ $6 \cdot 3 \div 5 = 1.26$ •² 4.64
2	<p>ans: $y = \frac{5x - 6}{3}$ 3KU</p> <ul style="list-style-type: none"> •¹ remove fractions •² manipulate formula •³ solve for y 	<ul style="list-style-type: none"> •¹ $3y + 6 = 5x$ •² $3y = 5x - 6$ •³ $y = \frac{5x - 6}{3}$
3	<p>ans: $\frac{73}{21} = 3\frac{10}{21}$ 3 KU</p> <ul style="list-style-type: none"> •¹ know order of calculations •² multiply fractions correctly •³ add fractions correctly 	<ul style="list-style-type: none"> •¹ $\frac{4}{5} \times \frac{10}{7}$ •² $2\frac{1}{3} + \frac{8}{7}$ •³ $3\frac{10}{21}$
4(a)	<p>ans: 0, 1, 2, 3, 4 4 KU</p> <ul style="list-style-type: none"> •1 removing brackets •2 collecting like terms •3 solving inequation •4 stating solution 	<ul style="list-style-type: none"> • 1 $12 - x - 2 \geq 1 + x$ • 2 $-2x \geq -9$ • 3 $x \leq \frac{9}{2}$ • 4 answer
5(a)	<p>ans: $W = -0.5d + 48$ 3KU</p> <ul style="list-style-type: none"> •¹ identifies y - intercept •² calculates gradient •³ states equation 	<ul style="list-style-type: none"> •¹ $c = 48$ •² $m = \frac{48 - 40}{0 - 16} = -0.5$ •³ $W = -0.5d + 48$
(b)	<p>ans: Yes, 3 days spare 3RE</p> <ul style="list-style-type: none"> •¹ correct strategy •² solves equation •³ correct conclusion 	<ul style="list-style-type: none"> •¹ $-0.5d + 48 = 0$ •² $d = 96$ •³ yes, 3 days to spare

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6	ans: $S = 6\pi \text{ cm}^2$ 4RE <ul style="list-style-type: none"> •¹ finds expressions for both areas •² correct strategy •³ calculates area •⁴ correct use of units 	<ul style="list-style-type: none"> •¹ $3 \cdot 5^2\pi$ and $2 \cdot 5^2\pi$ •² $\pi(3 \cdot 5^2 - 2 \cdot 5^2)$ •³ $\pi(1)(6)$ •⁴ $S = 6\pi \text{ cm}^2$
7(a)	ans : $(2x + 5)(x - 1)$ 2KU <ul style="list-style-type: none"> •¹ first correct factor •² second factor 	<ul style="list-style-type: none"> •¹ $2x + 5$ •² $x - 1$
(b)	ans : $(2x - 1)(x - 4)$ 2RE <ul style="list-style-type: none"> •¹ uses answer from (a) •² correctly simplifies 	<ul style="list-style-type: none"> •¹ $(2(x - 3) + 5)((x - 3) - 1)$ •² $(2x - 1)(x - 4)$
8	ans: 6m 3RE <ul style="list-style-type: none"> •¹ identifies S.F. for area •² states S.F. for length •³ calculates distance x 	<ul style="list-style-type: none"> •¹ area SF = 4 •² length SF = 2 •³ 6m
9(a)	ans: 9000cm^3 2KU <ul style="list-style-type: none"> •¹ substitution in formula •² calculation of volume •² rounding to one sig. fig 	<ul style="list-style-type: none"> •¹ $V = 3 \cdot 14 \times 10^2 \times 30$ •² $= 9420 \text{ cm}^3$ •³ $= 9000 \text{ cm}^3$
9(b)	ans: $x = 2\text{cm}$ 4RE <ul style="list-style-type: none"> •¹ finds volume of 1 cuboid •² substitutes values in formula •³ finds value of x^2 •⁴ answer 	<ul style="list-style-type: none"> •¹ $V_{\text{cub}} = \frac{9000}{500} = 18 \text{ cm}^3$ •² $18 = x \times x \times 4 \cdot 5$ •³ $x^2 = \frac{18}{4 \cdot 5} = 4$ •⁴ $x = \sqrt{4} = 2 \text{ cm}$

