

1 Evaluate.

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(a) $\sqrt{2^6}$

(a)[1]

(b) (2.5 × 10⁵) × (5 × 10³)Give your answer in standard form.

(b)[2

2 (a) Make n the subject of this formula.

$$T = n^2 + 5$$

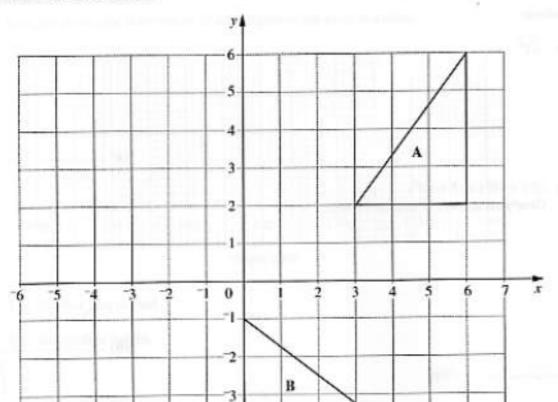
(a) n =[2

(b) Solve this equation by factorising.

$$x^2 + 7x + 10 = 0$$

(b)[3]

3



(a) Translate triangle A by $\begin{pmatrix} -6 \\ -1 \end{pmatrix}$. [2]

(b)	Describe fully the single transformation that maps triangle A onto triangle B.
	[3]

5

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CR ROC CR In these expressions a, b and c represent lengths.

$$a^{2} + ab + 3ac$$
 $2\pi a \frac{1}{4}\pi abc$ $2\pi a^{2} + \pi ab$

$$2\pi a$$

$$\frac{1}{4}\pi abc$$

$$2\pi a^2 + \pi ab$$

Which one of these expressions could represent a volume? Show how you decide.

(a) You are given that $0.3 = \frac{1}{3}$.

Use this information to express the following as fractions.

- (i) 0-i
- (ii) 0.03

(a)(i)[1]

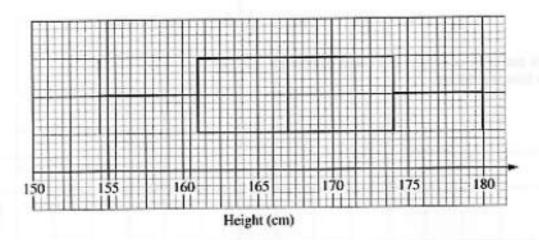
(ii)[1]

(b) Explain how you can tell that $\frac{11}{12}$ will be a recurring decimal.

You do not need to do any calculations.



6 This box plot shows the distribution of the heights of the boys in a class.



(a) Use this box plot to find

(i) the median height,

(a)(i) cm [1]

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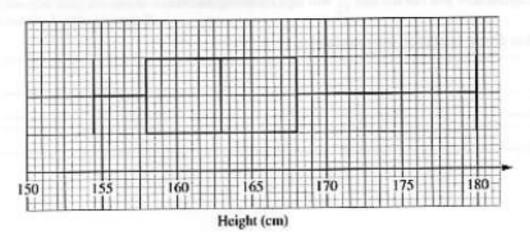
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(ii) the interquartile range of the heights.

(ii) cm [1]

(b) This box plot shows the distribution of the heights of the girls in the same class.



Make two comments comparing the heights of the boys and girls.

l.[1

2._____[1]



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7 Solve, algebraically, these simultaneous equations.

$$6x - y = -9$$
$$2x - 3y = 5$$

r=	
y =	[3]
	3]