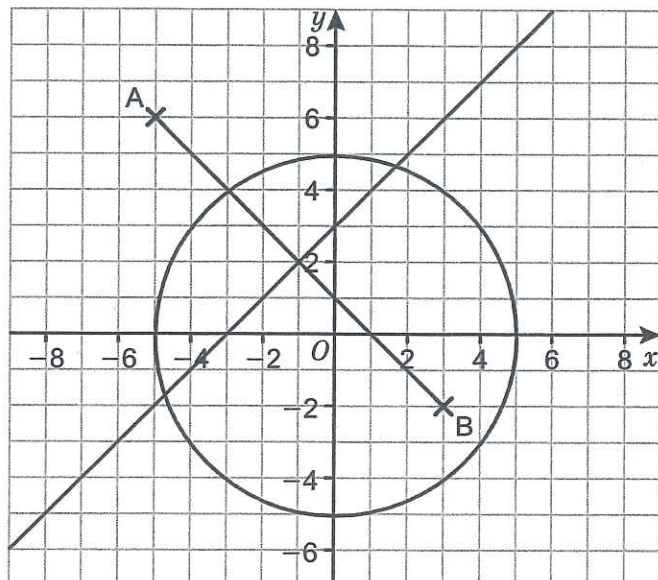


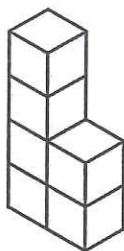
14 a, b



b (1.7, 4.7) and (-4.7, -1.7)

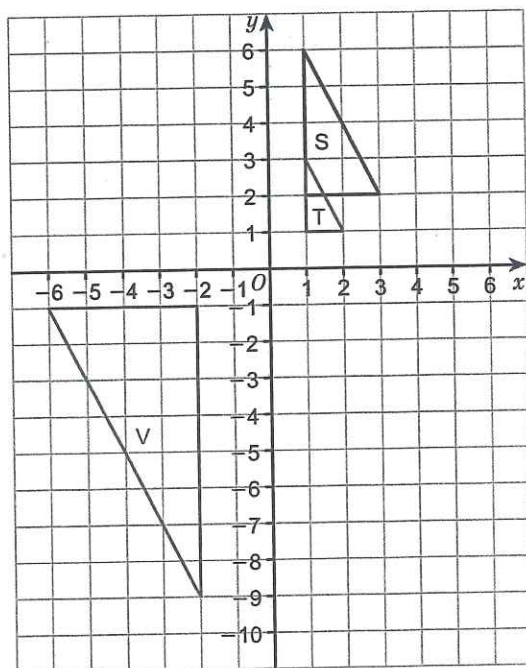
8 Unit test

- 1 Complete 3D sketch [3] or [-1] for each error

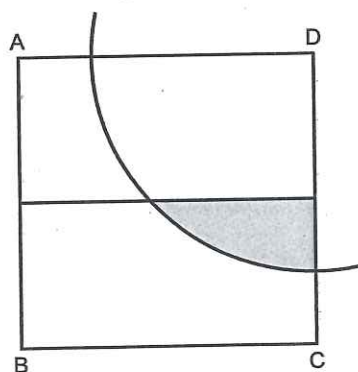


- 2 Correct triangle and arcs [3]
or [2] for correct triangle with no arcs/incorrect arcs OR 2 correct sides and arcs
or [1] for 2 correct sides
- 3 a Reflection in the line $y = x$ [2] *cao*, accept the word "reflected" [1] any statement including the word "reflection".
- b Rotation 90° anticlockwise, centre of rotation (2,1) [3] or rotation [1] (2,1) [1] 90° / quarter of a turn anticlockwise OR 270° / three-quarters of a turn clockwise [1]
- c Translation by vector $\begin{pmatrix} -3 \\ 1 \end{pmatrix}$ [2] or Translation [1] vector $\begin{pmatrix} -3 \\ 1 \end{pmatrix}$ [1]
- d Reflection in the y -axis [2] or reflection [1] y -axis OR line $x = 0$ [1]

- 4 a Completely correct image T, as shown [2] or shape enlarged by scale factor $\frac{1}{2}$ in a different position [1]



- b Completely correct image V, as shown [2] or shape enlarged by scale factor -2 in a different position [1]
- 5 Enlargement, scale factor 2 about (1,3) [3] or enlargement [1] scale factor 2 [1] about (1, 3) [1]
- 6 a Completely correct diagram: 3 perpendicular bisectors and an angle bisector constructed, sides the correct lengths (marked dimensions are 5 cm and 8 cm) [3] or [2] diagram drawn to scale but incorrect constructions or no arcs seen or [1] angle or two sides drawn to scale accurately
- b Answer in the range 45 – 47 m [1]
- 7 Arc drawn with radius 7 cm from D [1] Line drawn 5 cm from BC and parallel to BC [1]
Correct region shaded [1]



- 8 8 km [1] cao
- 9 a Correct scale drawing [2] or [1] one length and one angle correct b 258 – 265° [1]
- 10 $(-3, 2)$ [2] or [1] for $(-3, \text{other } y)$ or $(\text{other } x, 2)$

Sample student answer

Student B gives the best answer.
Student A has not given the direction or centre of rotation.
Student C has given two transformations.
The question asks for a single transformation.