

Name _____

Date _____

Stage 7 End-of-unit test 14

22 questions · 47 marks · calculators are not allowed · allow about 45 minutes

- 1 In which quadrant is the point $(-3, 5)$? [1]
☐ quadrant 1
☐ quadrant 2
☐ quadrant 3
☐ quadrant 4
- 2 How far apart are the points $(2, 7)$ and $(9, 7)$? [2]

- 3 How far apart are the points $(-4, -3)$ and $(-4, 6)$? [2]

- 4 What is the midpoint of $(-5, 2)$ and $(7, 2)$? [2]

- 5 A plan uses the scale 1 cm represents 4 m. A room is 7 cm long on the plan. How long is the real room, in metres? [2]

- 6 A map has scale 1 : 25 000. Two points are 6 cm apart on the map. How many kilometres apart are they? [3]

- 7 Translate the point $(3, -2)$ by the vector $(-5, 6)$. [2]

- 8 A point moves from $(1, 4)$ to $(6, -1)$. Write the translation as (across, up). [2]

- 9 After a translation, the image is ... [1]
☐ larger
☐ congruent to the object
☐ similar but not congruent
☐ a mirror image
- 10 Reflect the point $(4, 3)$ in the x-axis. [2]

- 11 Reflect the point $(-2, 5)$ in the y-axis. [2]

- 12 A point at $(6, 2)$ has an image at $(6, -2)$. Name the mirror line. [2]

- 13** A point lies on the mirror line. Where is its image? [2]
☐ On the other side
☐ In the same place
☐ At the origin
☐ It disappears
- 14** Rotate the point (3, 1) by 90° anticlockwise about the origin. [2]

- 15** Rotate the point (−4, 2) by 180° about the origin. [2]

- 16** Rotate the point (4, 2) by 90° anticlockwise about the centre (1, 1). [3]

- 17** To describe a rotation fully you must give ... [2]
☐ the angle only
☐ the angle and the direction
☐ the angle, the direction and the centre
☐ the centre only
- 18** Enlarge the point (3, 2) by scale factor 4, centre the origin. [2]

- 19** After an enlargement with scale factor 2, the image is ... [2]
☐ congruent to the object
☐ mathematically similar to the object
☐ a reflection of the object
☐ unchanged
- 20** A rectangle is 3 cm by 5 cm. It is enlarged by scale factor 3. What is the area of the image, in square centimetres? [4]

- 21** A shape has perimeter 18 cm. After an enlargement its perimeter is 54 cm. What was the scale factor? [3]

- 22** Which transformation does **not** give a congruent image? [2]
☐ translation
☐ reflection
☐ rotation
☐ enlargement

END OF TEST