Test - Reflection and translation

Year: Year 5 · Duration: 40 minutes · /20

Name:	Date:	**Mark: /20**

Question	1	2	3	4	5	Total
marks	4	4	4	3	5	**20**
Mark						

Show your working.

Question 1 (4 marks)

Question 1 – Coordinates and translation

(a) Write the coordinates of the point that is 4 squares across and 6 squares up from the origin.

(b) Translate (3, 2) by 5 squares right and 3 squares up.

(c) Translate (8, 7) by 4 squares left and 5 squares down.

(d) A point moves from (2, 5) to (6, 1). Describe the translation.

Question 2 (4 marks)

Question 2 – Reflection

The mirror line is x = 4. Find the image of (a) (1, 2) (b) (3, 5) (c) (4, 1). (d) The mirror line is y = 2. Find the image of (5, 6).

Question 3 (4 marks)

Question 3 – Translating a shape

A triangle has corners A(1, 1), B(4, 1) and C(1, 3).

(a) Write the corners after a translation of 3 squares right and 2 squares up. (2 marks)

(b) The triangle is now reflected in the line x = 8. Write the new corners. (2 marks)

Question 4 (3 marks)

Question 4 – True or false?

Say whether each statement is true or false and give a reason.

(a) A translation changes the size of a shape. (1 mark)

(b) A point on the mirror line does not move in a reflection. (1 mark)

(c) (2, 7) and (7, 2) are the same point. (1 mark)

Question 5 (5 marks)

Question 5 – The playground plan

A plan of a playground uses a grid. The slide is at (2, 1) and the swings are at (6, 4). The mirror line x = 5 shows a fence.

(a) Describe the translation from the slide to the swings. (2 marks)

(b) Reflect the slide in the line x = 5. Where does it end up? (1 mark)

(c) The swings are moved 3 squares left and 2 squares down. Where are they now? (1 mark)

(d) Is the swing in its new position nearer to the reflected slide or to the original slide? Show your working. (1 mark)