4.16 Transformations: Reflection and Rotation: 10-minute Pack

Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Reflect the point H(-3, -2) in the line x = -1. Give the coordinates of the image H'.

(2)

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2 A rectangle has corners at (2, -1), (6, -1), (6, 1) and (2, 1). First rotate the rectangle 90 degrees anticlockwise about the origin, then reflect the result in the x-axis. Give the final coordinates of the four vertices.

(3)

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3 The point P (-1, -2) is rotated 90° clockwise about (2, 2). Write down the coordinates of the image of P.

(3)

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Mark scheme · 4.16 Transformations: Reflection and Rotation: 10-minute Pack

Question 1

method: find horizontal distance from H to the line x = -1 and reflect across it	**M1**
H' (1, -2) cao	**A1**

Answer: **(1, -2)**

Question 2

rotate 90 degrees anticlockwise: (x, y) -> (-y, x) shown for at least one vertex	**M1**
reflect in x-axis: show y -> -y for at least one rotated vertex	**M1**
final vertices (1, -2), (1, -6), (-1, -6), (-1, -2) cao (in any order)	**A1**

Answer: **(1, -2), (1, -6), (-1, -6), (-1, -2)**

Question 3

vector from the centre to P found	**M1**
rotated correctly	**M1**
(-2, 5) cao	**A1**

Answer: **(-2, 5)**

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