

Exercise walk-through

5.2

Transformations

Pearson Edexcel · International GCSE · Mathematics A

Exercises 2.1·2.3

2.1 (Foundation) For $C=(1,1)$, $P=(3,2)$, $k=2$, find the image x-coordinate.

2.2 (Foundation) For that enlargement, find the image y-coordinate.

2.3 (Foundation) Reflect $(3,2)$ in the y-axis. Find the new x-coordinate.

3 Exam-style questions

Exercises 2.1·2.3

2.1 (Foundation) For $C=(1,1), P=(3,2), k=2$, find the image x-coordinate.

2.1 Image $= C + 2(P - C)$. Its x-coordinate is $1 + 2(3 - 1) = 5$.

2.2 (Foundation) For that enlargement, find the image y-coordinate.

2.2 Its y-coordinate is $1 + 2(2 - 1) = 3$.

2.3 (Foundation) Reflect $(3,2)$ in the y-axis. Find the new x-coordinate.

3 Exam-style questions

2.3 Reflection in the vertical axis negates x: 3 becomes -3.

Exercise 3.1

3.1 Decide whether this claim is true. Justify with a concrete calculation or counterexample: Every enlargement is centred at the origin unless its scale factor is negative.

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3.1 False. Centre $(1,1)$, positive scale factor 2 maps $(3,2)$ to $(5,3)$. The origin is not the centre; the centre is specified independently of the factor's sign.

Local review guidance: show the chosen method; give the checked result; explain the condition or failed shortcut. This is authored classroom guidance.