TRANSLATION AND ENLARGEMENT
Geometry and Measures

Key Concepts

A **translation** moves a shape on a coordinate grid. Vectors are used to instruct the movement:

$\begin{pmatrix} x \\ y \end{pmatrix}$

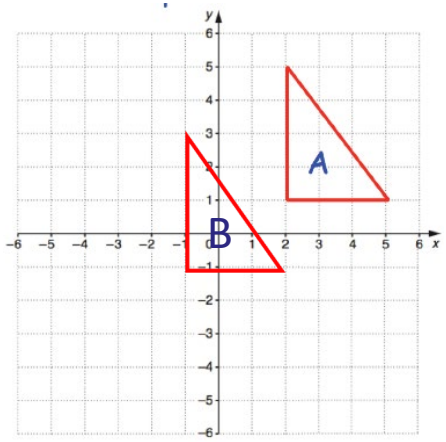
Positive-Right
Negative - Left

Positive-Up
Negative - Down

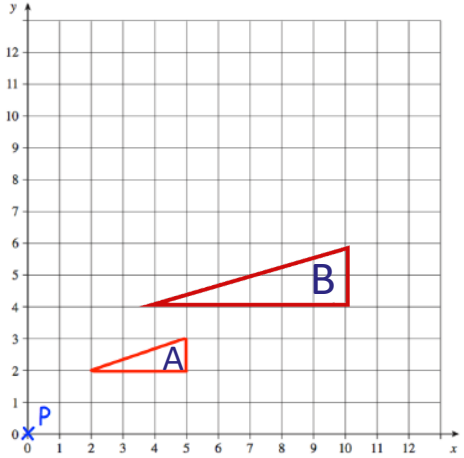
An **enlargement** changes the size of an image using a scale factor from a given point.

Examples

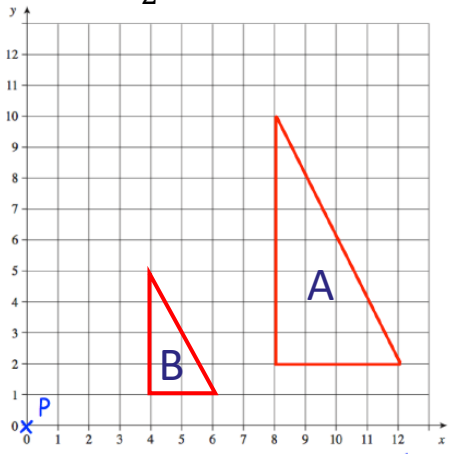
Translate shape A by $\begin{pmatrix} -3 \\ -2 \end{pmatrix}$. Label it B



Enlarge shape A by scale factor 2 from point P.



Enlarge shape A by scale factor $\frac{1}{2}$ from point P.



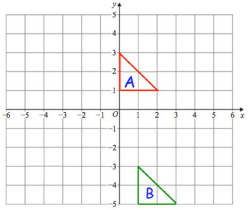
MathsWatch

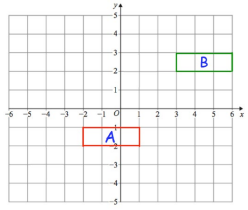
50, 148, 181a

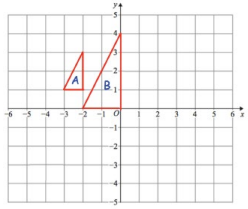
Key Words

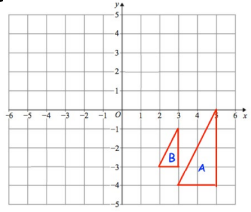
Translation
Enlargement
Scale factor
Centre
Positive
Negative

Describe the **single** transformation you see on each coordinate grid from A to B:









ANSWERS: a) translation $\begin{pmatrix} 1 \\ -6 \end{pmatrix}$ b) translation $\begin{pmatrix} 5 \\ 4 \end{pmatrix}$ c) enlarge, centre (-4,2) scale factor 2
d) enlarge, centre (1,-2) scale factor $\frac{1}{2}$