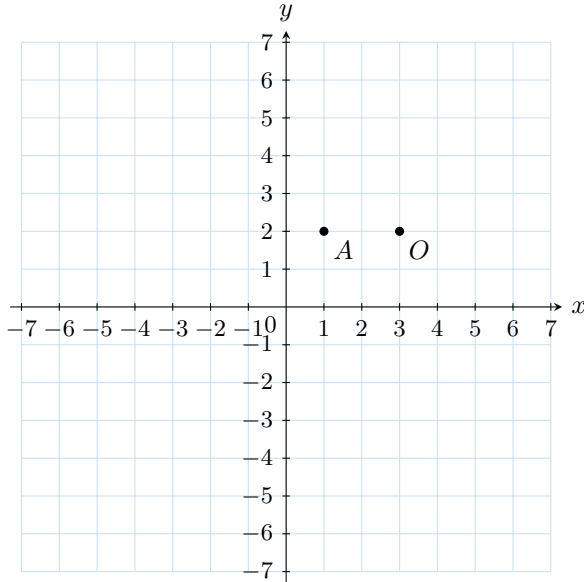


POINT REFLECTION

A DEFINITIONS

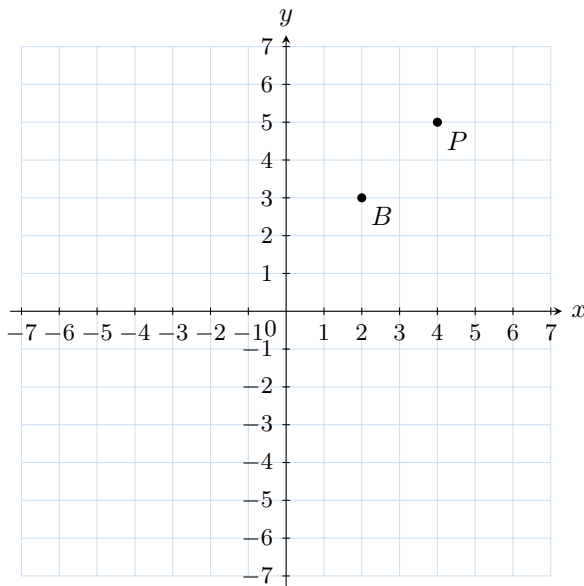
A.1 FINDING IMAGES OF POINTS

Ex 1: Find the coordinates of the image of point A under a point reflection over point O .



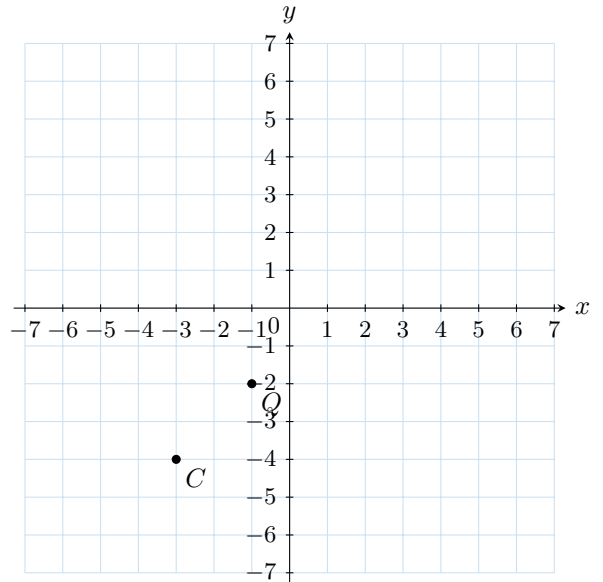
$A'(\text{ }, \text{ })$

Ex 2: Find the coordinates of the image of point B under a point reflection over point P .



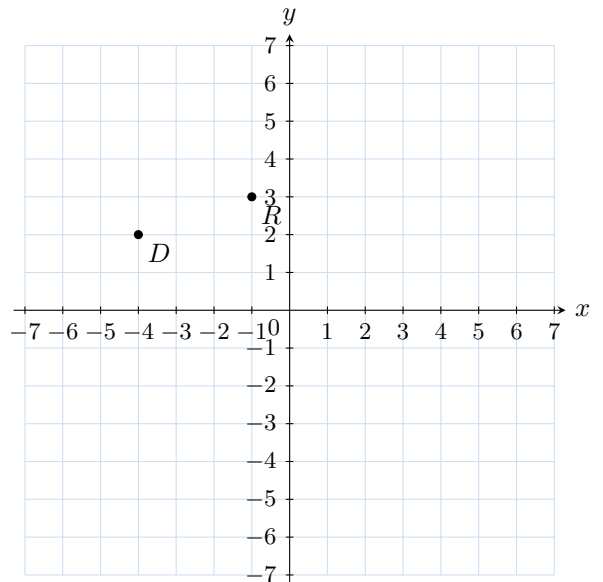
$B'(\text{ }, \text{ })$

Ex 3: Find the coordinates of the image of point C under a point reflection over point Q .



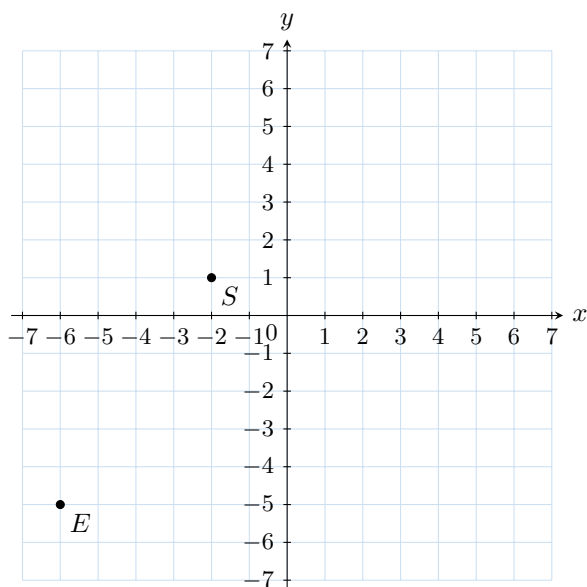
$C'(\text{ }, \text{ })$

Ex 4: Find the coordinates of the image of point D under a point reflection over point R .

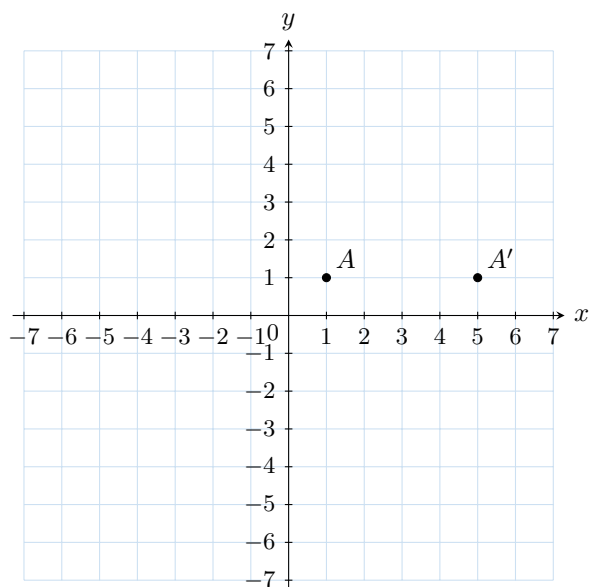


$D'(\text{ }, \text{ })$

Ex 5: Find the coordinates of the image of point E under a point reflection over point S .



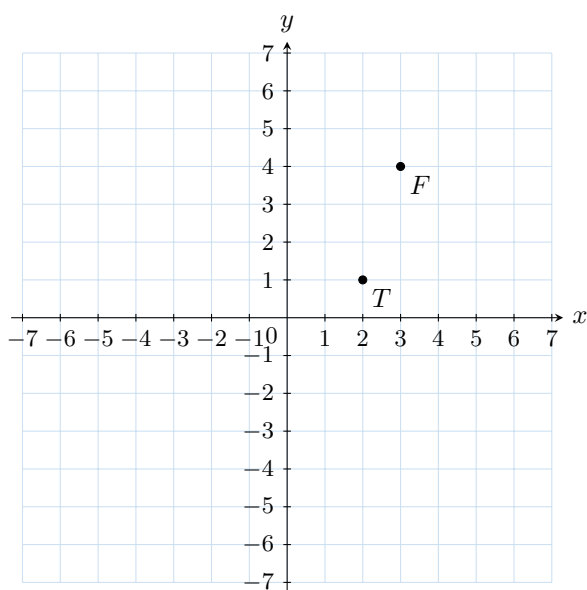
$E'(\text{ }, \text{ })$



Find the coordinates of the point O

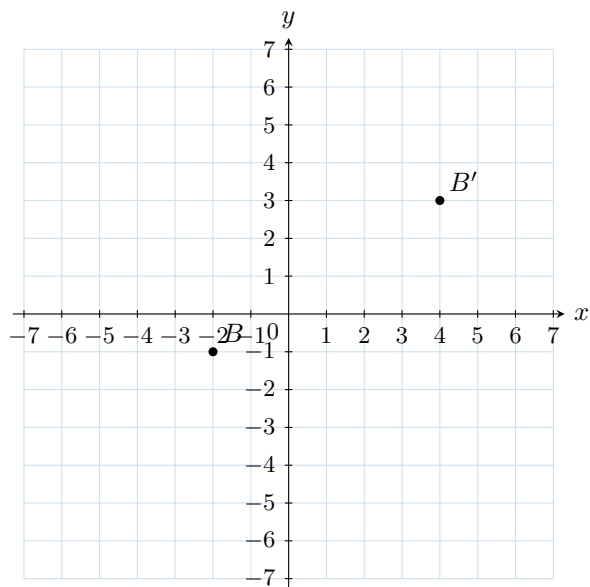
$O(\text{ }, \text{ })$

Ex 6: Find the coordinates of the image of point F under a point reflection over point T .



$F'(\text{ }, \text{ })$

Ex 8: The point B' is the image of point B under a point reflection over point P .



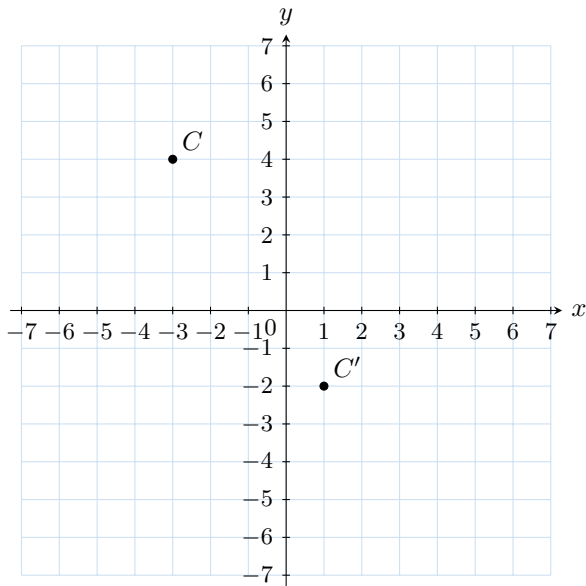
Find the coordinates of the point P

$P(\text{ }, \text{ })$

A.2 FINDING THE COORDINATES OF THE CENTER OF SYMMETRY

Ex 7: The point A' is the image of point A under a point reflection over point O .

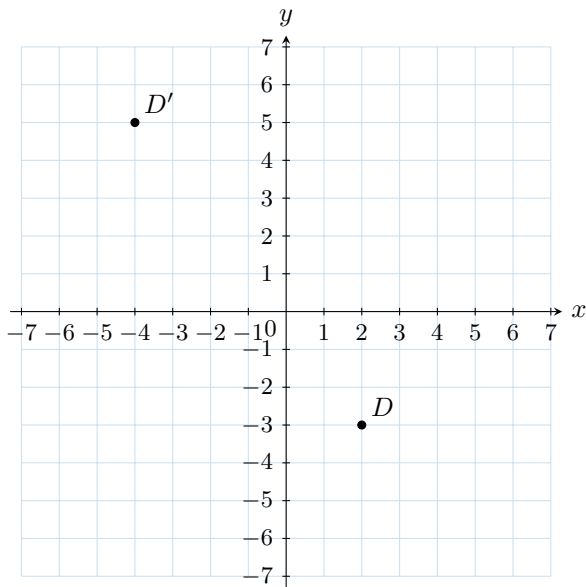
Ex 9: The point C' is the image of point C under a point reflection over point Q .



Find the coordinates of the point Q

$Q(\text{ }, \text{ })$

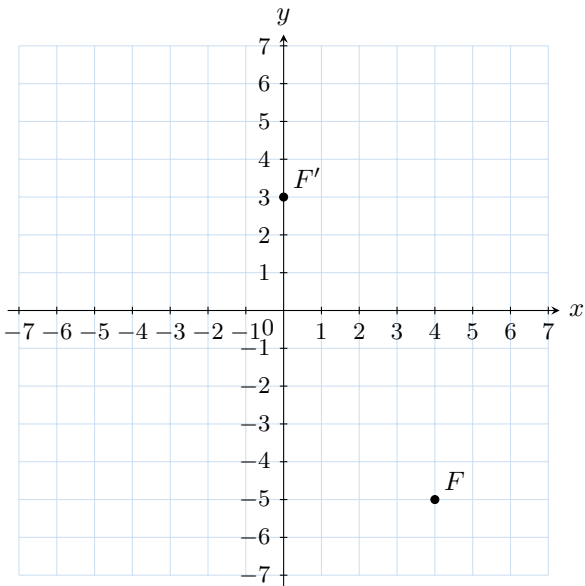
Ex 10: The point D' is the image of point D under a point reflection over point R .



Find the coordinates of the point R

$R(\text{ }, \text{ })$

Ex 11: The point F' is the image of point F under a point reflection over point S .

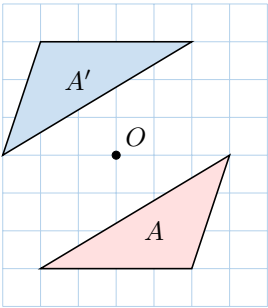


Find the coordinates of the point S

$S(\text{ }, \text{ })$

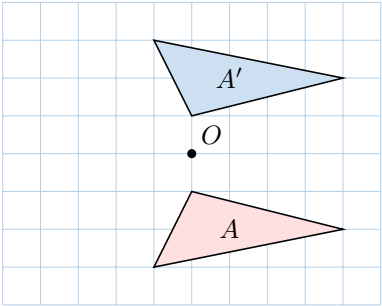
A.3 REFLECTIONS OF FIGURES

MCQ 12: Is the figure A' the image of figure A under the point reflection over point O ?



- ☐ Yes
- ☐ No

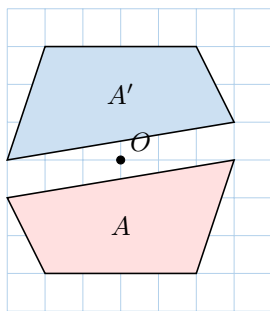
MCQ 13: Is the figure A' the image of figure A under the point reflection over point O ?



- ☐ Yes
- ☐ No

MCQ 14: Is the figure A' the image of figure A under the point reflection over point O ?

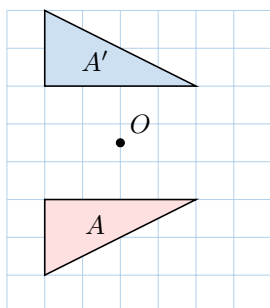




☐ Yes

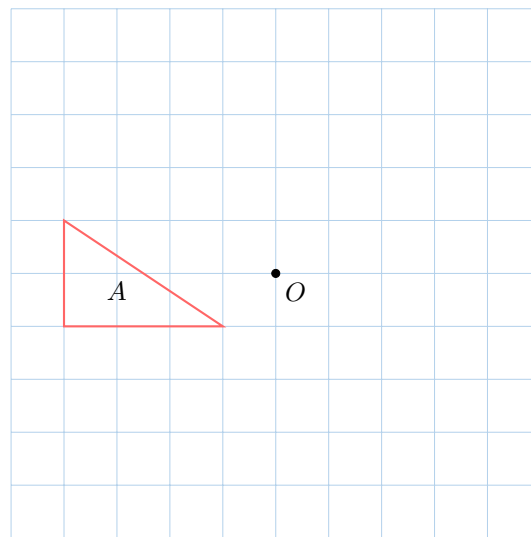
☐ No

MCQ 15: Is the figure A' the image of figure A under the point reflection over point O ?

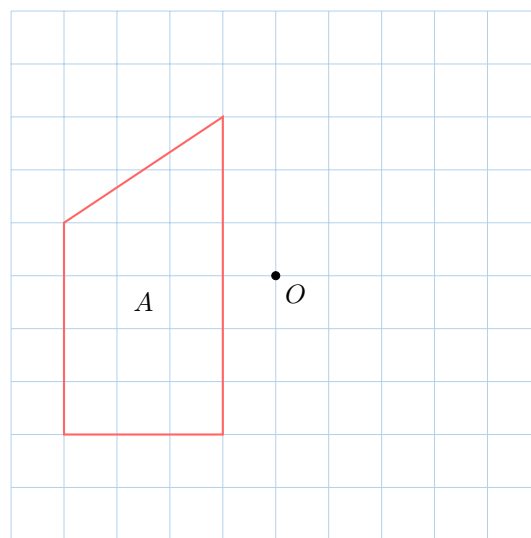


☐ Yes

☐ No

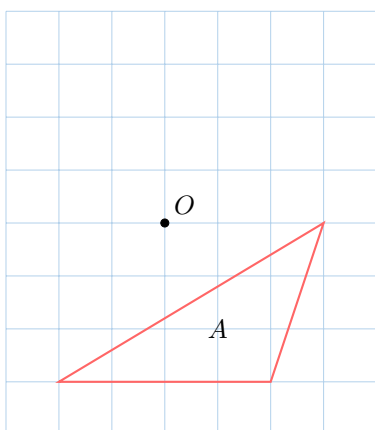


Ex 18: Draw the figure A' , the image of figure A under the point reflection over point O .

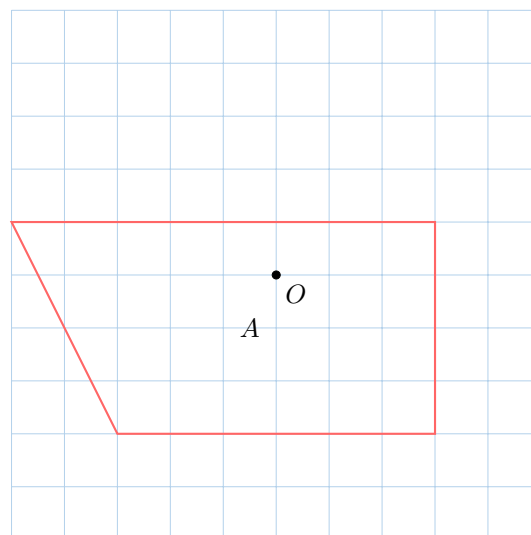


A.4 DRAWING IMAGES FIGURES

Ex 16: Draw the figure A' , the image of figure A under the point reflection over point O .



Ex 17: Draw the figure A' , the image of figure A under the point reflection over point O .



B CENTER OF SYMMETRY

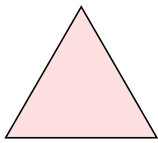
B.1 NUMBER OF CENTERS OF SYMMETRY FOR COMMON SHAPES

Ex 20: Count the number of centers of symmetry for the rectangle.



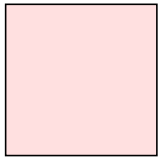
center of symmetry

Ex 21: Count the number of centers of symmetry for the equilateral triangle.



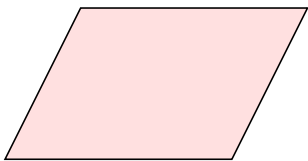
centers of symmetry

Ex 22: Count the number of centers of symmetry for the square.



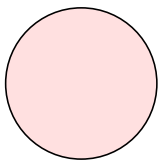
center of symmetry

Ex 23: Count the number of centers of symmetry for the parallelogram.



center of symmetry

Ex 24: Count the number of centers of symmetry for the circle.



center of symmetry