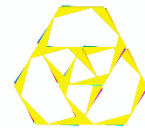




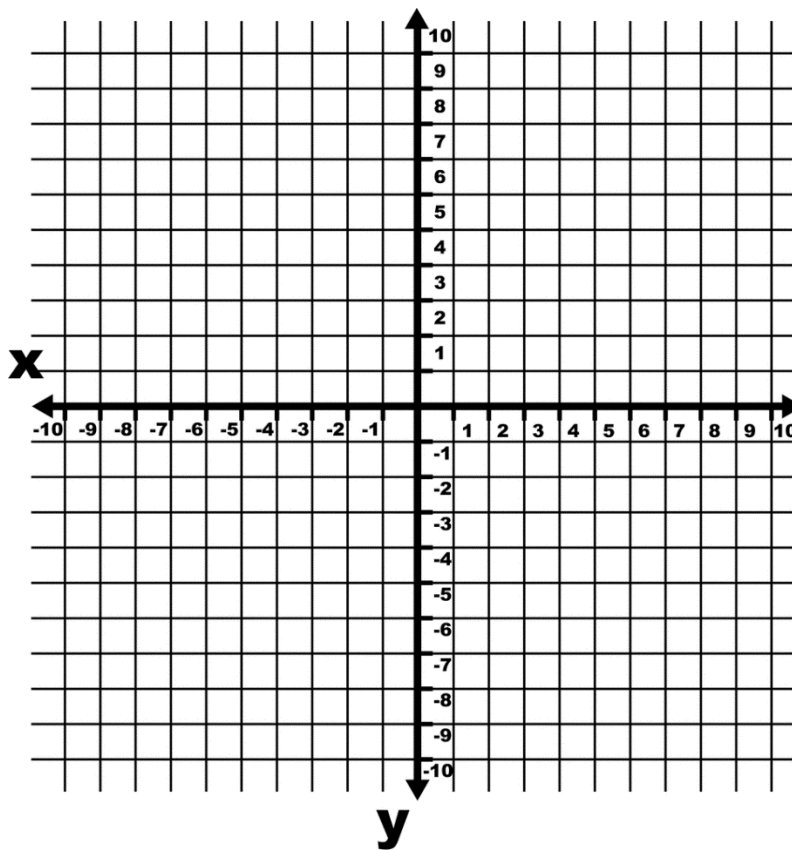
Grade 9 - Mathematics

Transformation Geometry 3



Activity

On the cartesian plane below, draw in the line $y = x$



- 1a. Plot point A at $(-8; -3)$
- b. Reflect point A across line $y = x$
- c. What would the name of the image be?

- d. What would the co-ordinates of the image be?



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2a. On the same cartesian plane that was used in (1) plot point B at (2; 5)

b. Reflect point b across line $y = x$

c. What would the name of the image be?

d. What would the co-ordinates of the image be?

3a. On the same cartesian plane that was used in (1) plot point C at (3; 1)

b. Reflect point b across line $y = x$

c. What would the name of the image be?

d. What would the co-ordinates of the image be?

4a. Join the points to their images, using a blue pen.

b. Are the lines perpendicular to the line $y = x$

c. Is each point and its image the same distance away from the line $y = x$

5. Answer the following:

a. Point D is at (6;2). What are the co-ordinates of D^1 if it is reflected across the line $y = x$.

b. Point E (-8; 2) is reflected across the line $y = x$ to give image E^1 . What would the co-ordinates of E^1 be?

(i) (8; -2)

(ii) (-2; 8)

(iii) (2; -8)

(iv) (-8; 2)



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