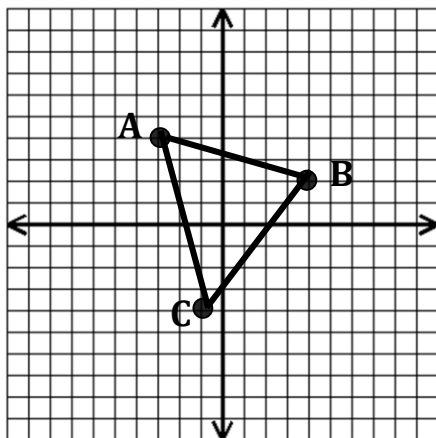


Transformations

REFLECTIONS

EXAMPLE 1: Reflect $\triangle ABC$ across the x – *axis* and name the coordinates.



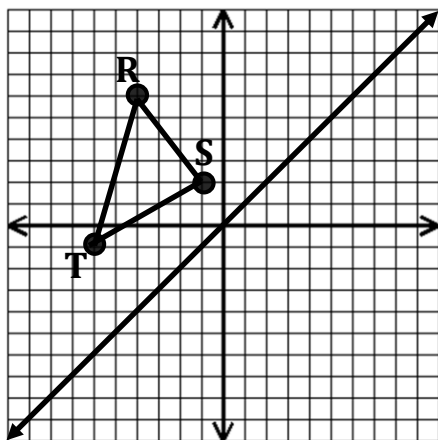
$$A(\underline{\quad}, \underline{\quad}) \rightarrow A'(\underline{\quad}, \underline{\quad})$$

$$B(\underline{\quad}, \underline{\quad}) \rightarrow B'(\underline{\quad}, \underline{\quad})$$

$$C(\underline{\quad}, \underline{\quad}) \rightarrow C'(\underline{\quad}, \underline{\quad})$$

Do you see a pattern?

EXAMPLE 2: Reflect $\triangle RST$ across the line $y = x$ and name the coordinates.



$$R(\underline{\quad}, \underline{\quad}) \rightarrow R'(\underline{\quad}, \underline{\quad})$$

$$S(\underline{\quad}, \underline{\quad}) \rightarrow S'(\underline{\quad}, \underline{\quad})$$

$$T(\underline{\quad}, \underline{\quad}) \rightarrow T'(\underline{\quad}, \underline{\quad})$$

Do you see a pattern?

What would the pattern be to reflect across the y – *axis*?

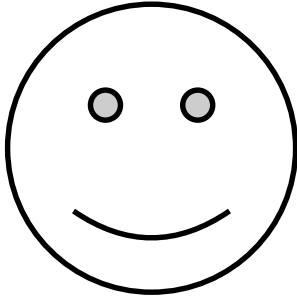
LINES OF SYMMETRY

EXAMPLE 3: What, if any, were the lines of symmetry in EXAMPLES 1 & 2?

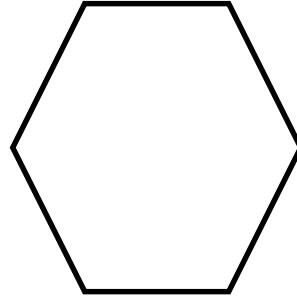
- EXAMPLE 1 –
- EXAMPLE 2 –

EXAMPLE 4: Draw the line(s) of symmetry, if any, for the following figures.

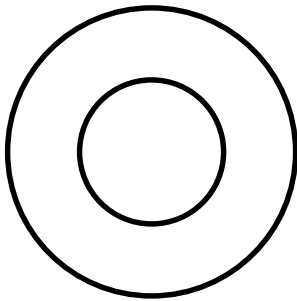
a)



b)



c)

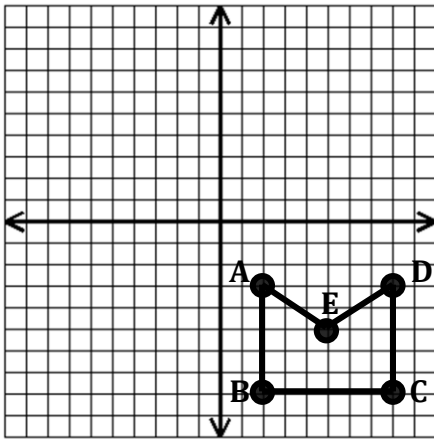


d)



TRANSLATIONS

EXAMPLE 5: Translate the figure *left 6* and *up 8* and name the coordinates.



A' (_____, _____)

B' (_____, _____)

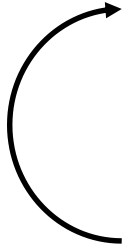
C' (_____, _____)

D' (_____, _____)

E' (_____, _____)

ROTATIONS

Two types:



Determined by degrees:

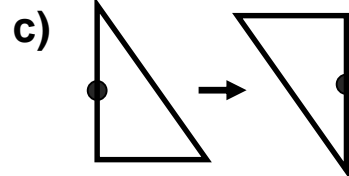
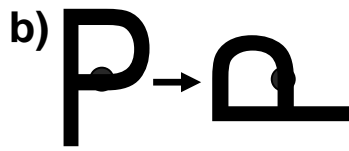
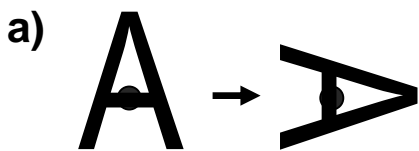
90°:

180°:

270°:

360°:

EXAMPLE 6: Describe each rotation.



EXAMPLE 7: Draw the resulting triangles when the triangle is rotated 90°, 180°, and 270° clockwise.

Original Points

A(____, ____)

B(____, ____)

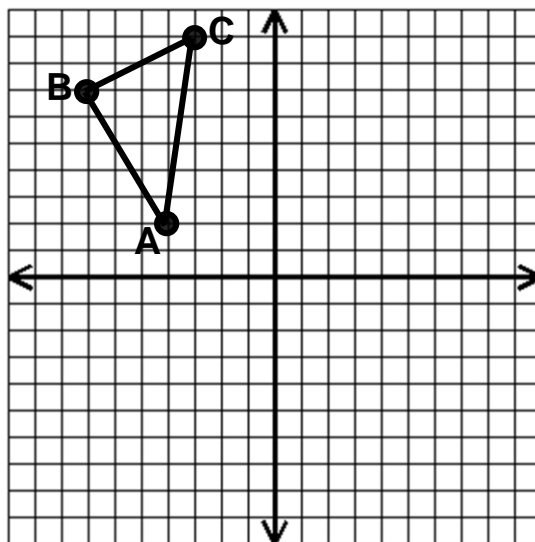
C(____, ____)

180°

A'(____, ____)

B'(____, ____)

C'(____, ____)



90° Clockwise
(270° Counter-clockwise)

A'(____, ____)

B'(____, ____)

C'(____, ____)

270° Clockwise
(90° Counter-clockwise)

A'(____, ____)

B'(____, ____)

C'(____, ____)

DILATIONS WITH SLOPE

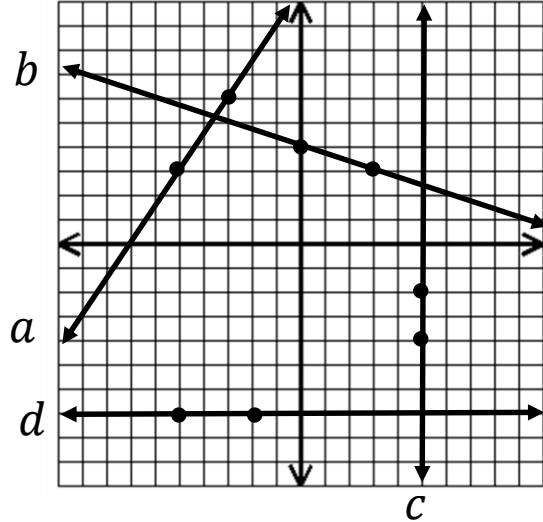
EXAMPLE 8: Use the graph below to find the following slopes.

a) slope of line *a*: _____

b) slope of line *b*: _____

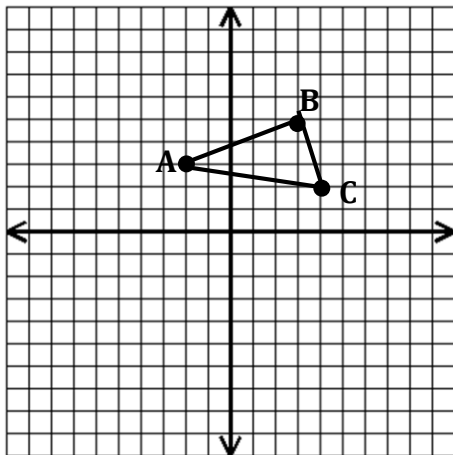
c) slope of line *c*: _____

d) slope of line *d*: _____



Slope can be useful in dilating images.

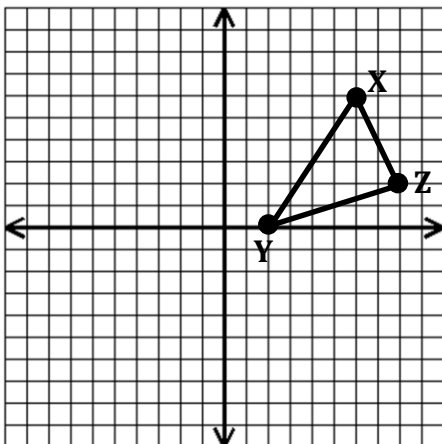
EXAMPLE 9: Use “slope” to produce a dilation of $\triangle ABC$ with a scale factor of 2. Use “B” as your center.



A' (_____, _____)

C' (_____, _____)

EXAMPLE 10: Use “slope” to produce a dilation of $\triangle XYZ$ with a scale factor of $\frac{1}{2}$. Use “X” as your center.



Y' (_____, _____)

Z' (_____, _____)