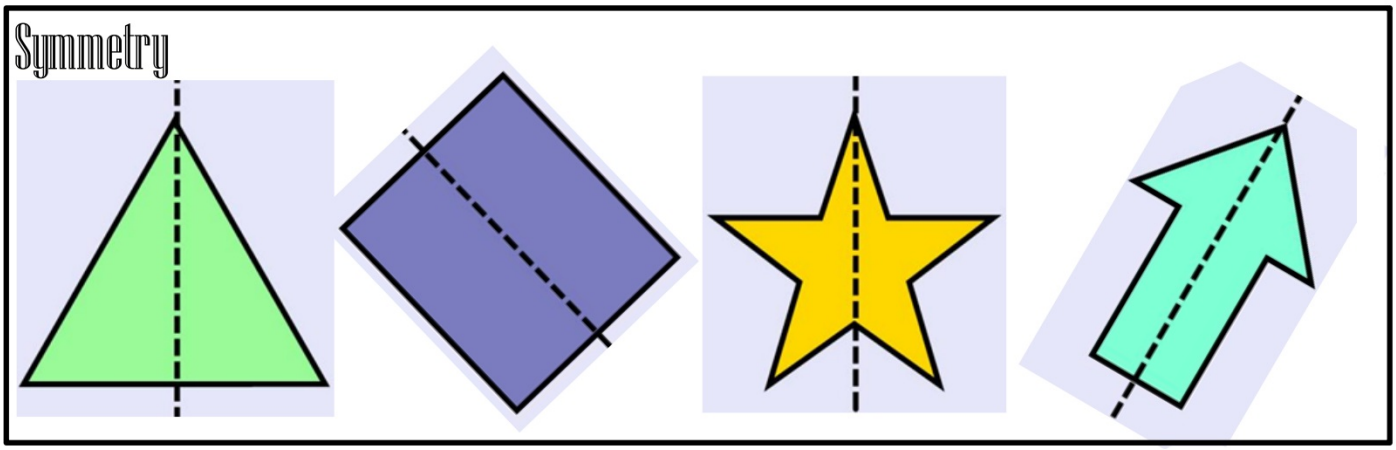
Line Reflections

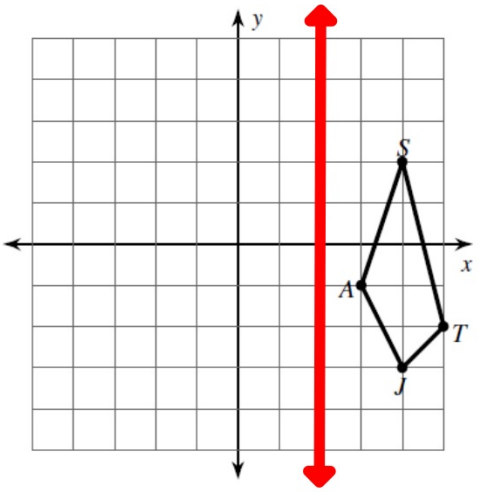
Math 8



We know how to reflect over the x-axis and the y-axis. We need to be able to reflect over any line on a coordinate plane. When the line of symmetry is either horizontal or vertical, it's easy! We just need to count the number of units it takes to get to the line. Then count the same amount of units to reflect over it.

Let's try a few examples of reflecting over lines other than the x and y axes:

1.



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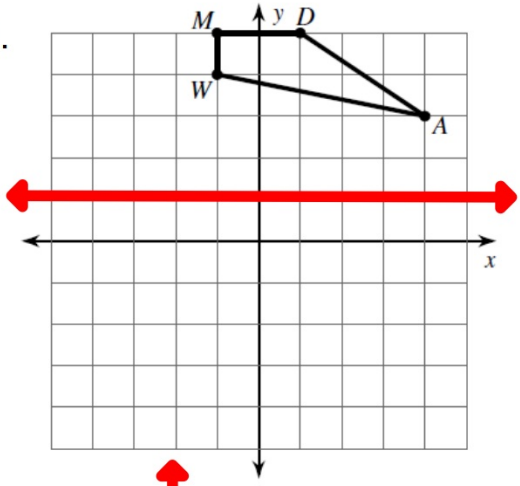
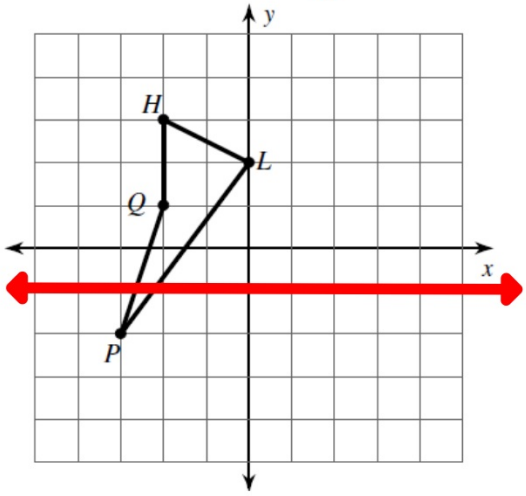
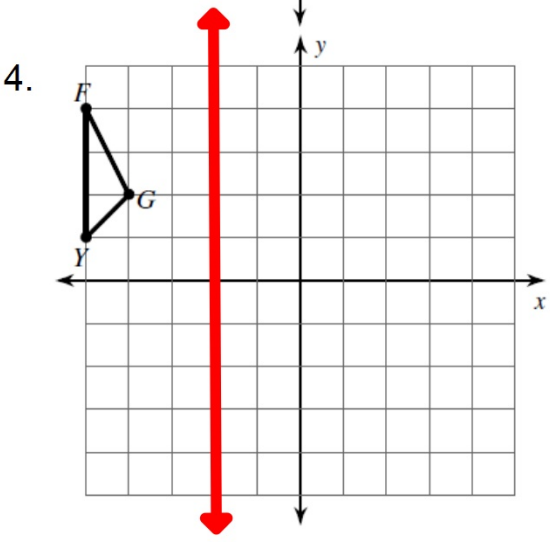


3.



4.



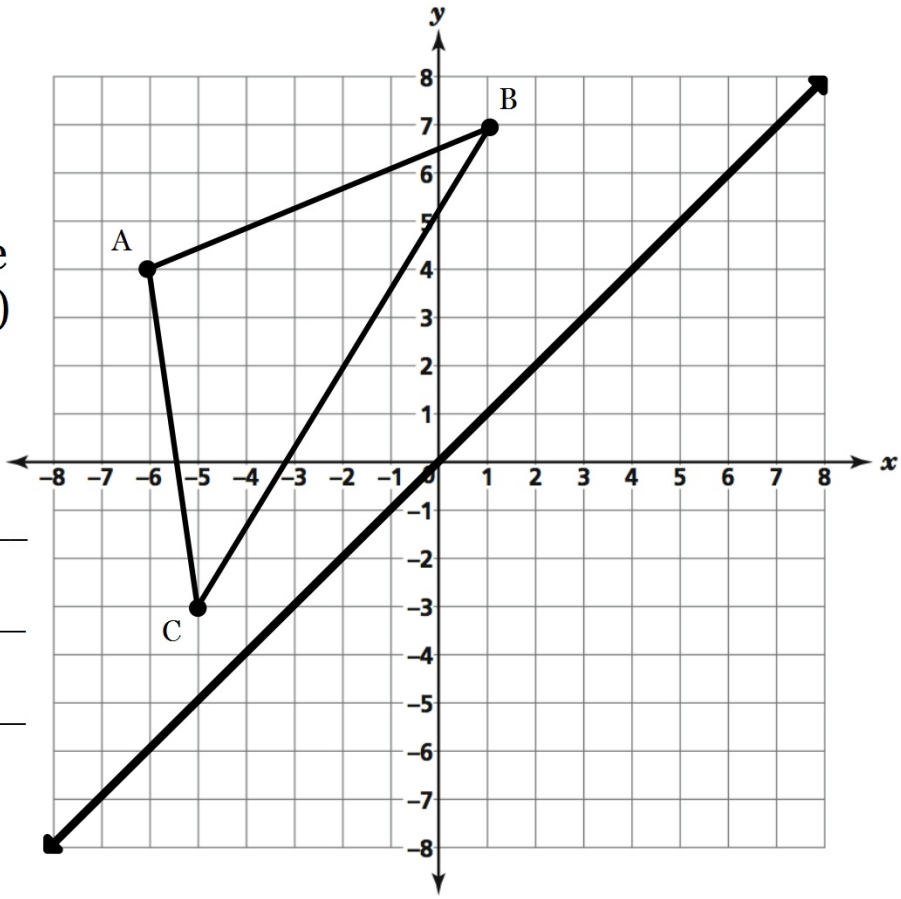
Line Reflections

y = x

Example 1

Try this !!!

Reflect Δ ABC over the line on the graph (y=x)



A _____ A' _____

B _____ B' _____

C _____ C' _____

Do you notice anything?

Rule: _____

Example 2

Reflect Δ DEF over the line on the graph (y=x)

D _____ D' _____

E _____ E' _____

F _____ F' _____

On the lines below, explain how you determined the location of D'

_____

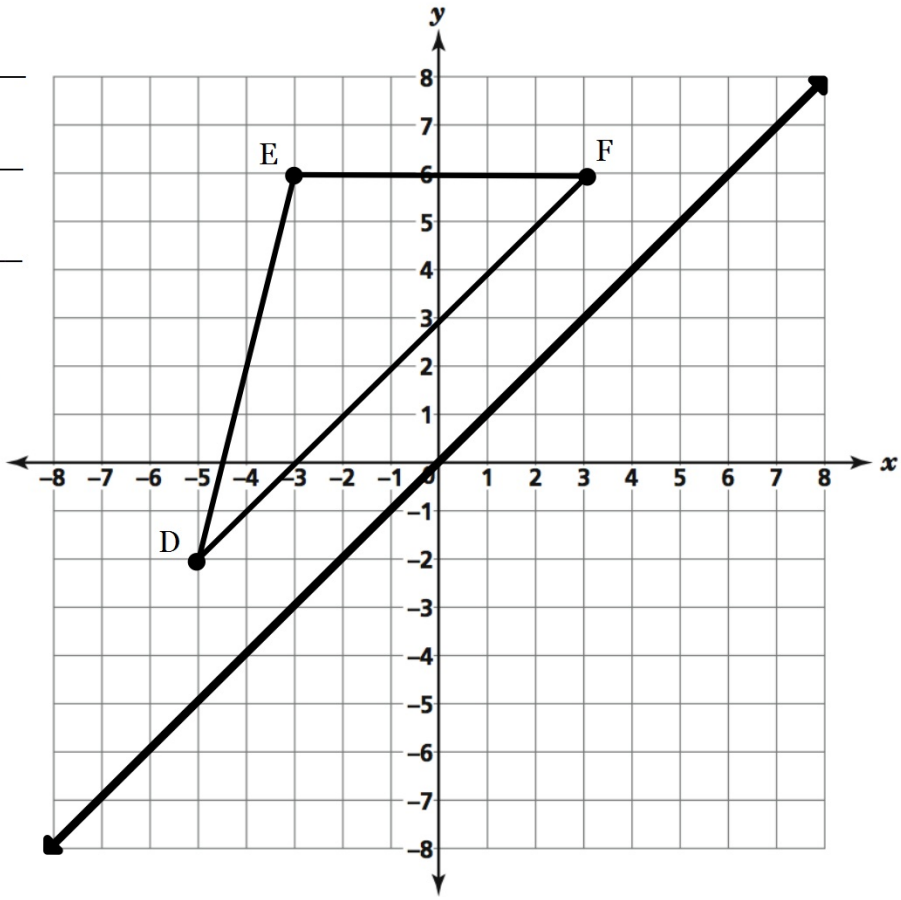
_____

_____

_____

_____

_____



Example 3 Reflect Δ DEF over the line on the graph (y=-x)

D _____ D' _____

E _____ E' _____

F _____ F' _____

What happens to the coordinate when you reflect over the line y = -x ???

_____

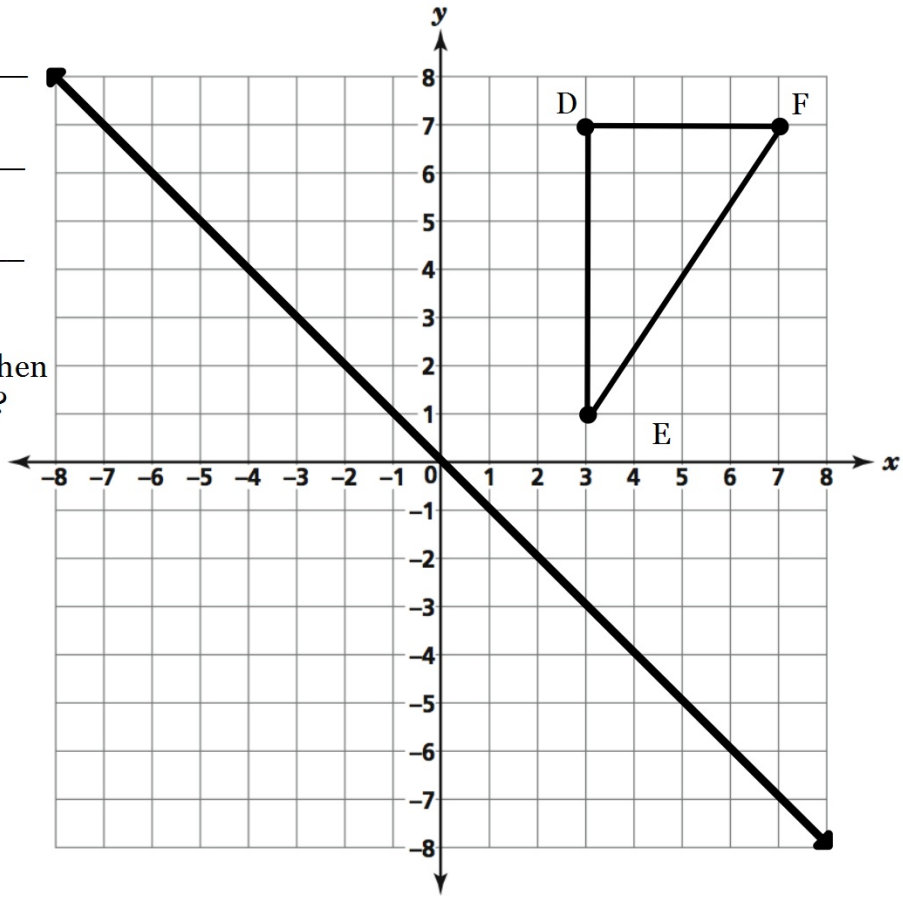
_____

_____

_____

_____

_____



Example 4 Reflect quadrilateral SLAP over the line on the graph (y=-x)

S _____ S' _____

L _____ L' _____

A _____ A' _____

P _____ P' _____

Explain how you determined the location of the image S'L'A'P'

_____

_____

_____

_____

_____

_____