7.7 notes

Friday, May 13, 2016 10:02 AM

7.7 – Identifying Types of Symmetry on the Cartesian Plane

Focus: Identify and classify line and rotational symmetry.

Main Ideas:

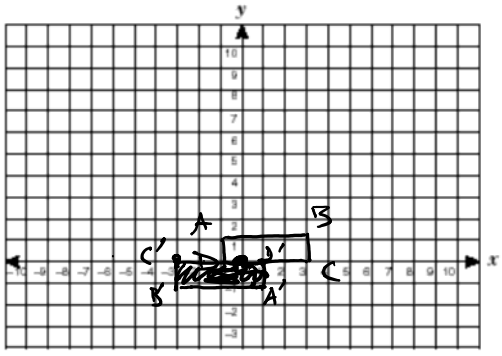
Warmup:
Look at Example 1 on p.369 (don't look at solutions).
For each of a, b, and c, determine whether they are related by line symmetry, rotational symmetry, or both. Then give specifics about their symmetry.

a) rotational symmetry: 180° clockwise around point (0,3)

b) line symmetry: reflected through x-axis.
rotational symmetry: 180° around (-2.5,0)

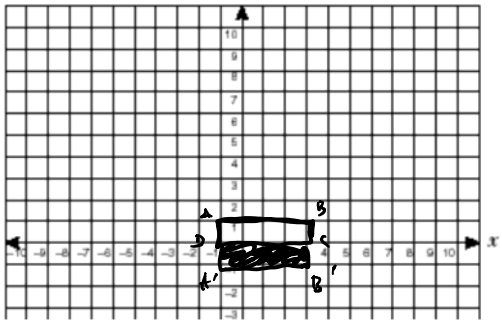
c) line symm: reflected in a diagonal line
rotational symm: 90° around (-5,4)

Ex1
Cover p.371, and do example 2 on p.370 by first copying the image onto the grid.



a)

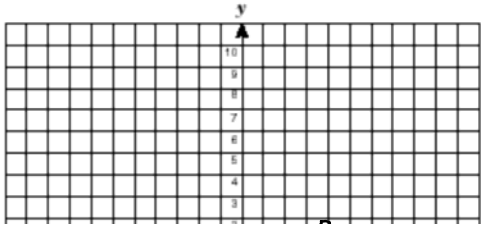
Point	Image
A(-1,1)	A'(1,-1)
B(3,1)	B'(-3,-1)
C(3,0)	C'(-3,0)
D(-1,0)	D'(1,0)



b)

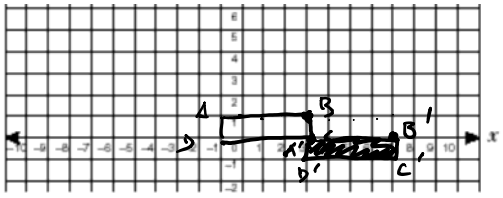
Point	Image
A(-1,1)	A'(-1,-1)
B(3,1)	B'(3,-1)
C(3,0)	C'(3,0)
D(-1,0)	D'(-1,0)

For part c, a translation means to move each corner of the shape by what is indicated.



c)

Point	Image
A(-1,1)	A'(3,0)
B(3,1)	B'(7,0)
C(3,0)	C'(7,-1)

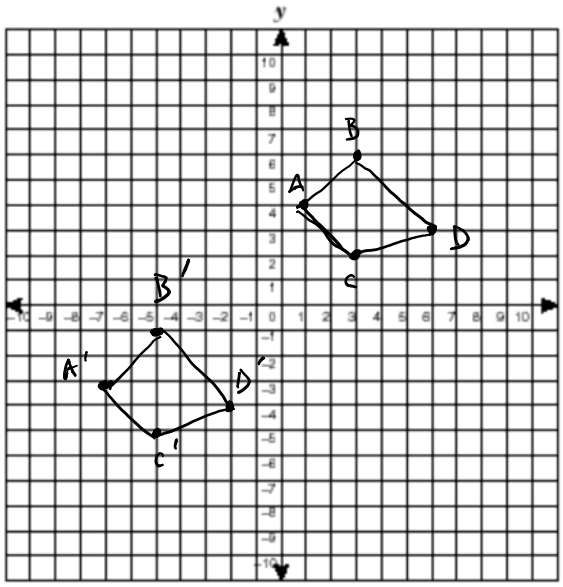


A(-1,1)	A'(3,0)
B(3,1)	B'(7,0)
C(3,0)	C'(7,-1)
D(-1,0)	D'(3,-1)

For part c in the last example, what is another way to write the translation 4 units right and 1 unit down. What's another way to write 3 units left and 5 units up?

R4, D1
L3, U5
} translation shortfnm.

Ex3
a) Draw the following shape on the grid: A(1, 4), B(3, 6), C(3, 2), D(6, 3)
b) Translate the shape by L8, D7 and redraw and complete the table
c) Is there any line or rotational symmetry in the completed diagram?



Point	Image
A(1,4)	A'(-7,-3)
B(3,6)	B'(-5,-1)
C(3,2)	C'(-5,-5)
D(6,3)	D'(-2,-4)

(c) no symmetry!

Assignment: p. 357 #3 - 6 } last day
p. 365 #4 - 9
p. 373 #3 - 8, 13 (today)

Ch. 7 Test Thursday May 26th

Reflection: What do you have to practice most about transformations (translations, reflections, and rotations)? Explain.