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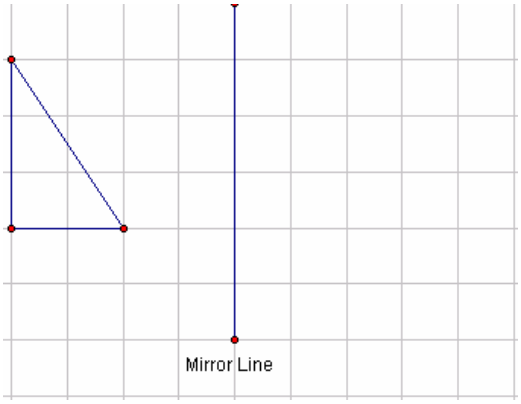
Extra Practice 1

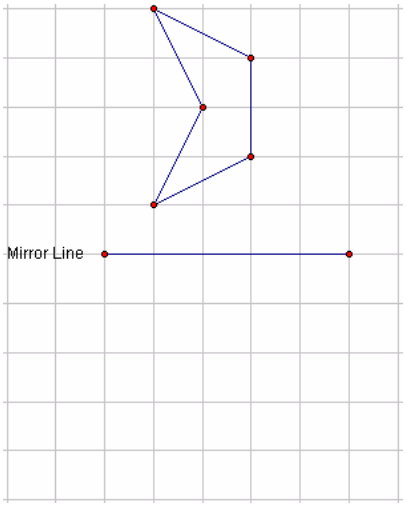
Lesson 1: Reflections and Translations

1. Draw the reflected image of each figure.

a)

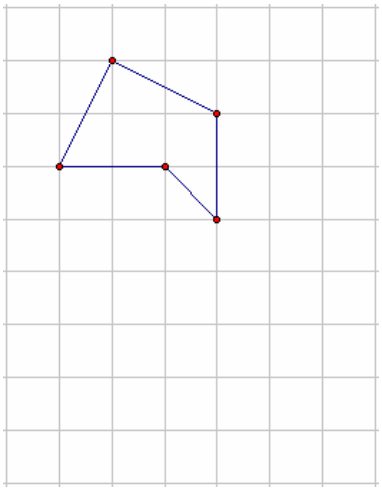


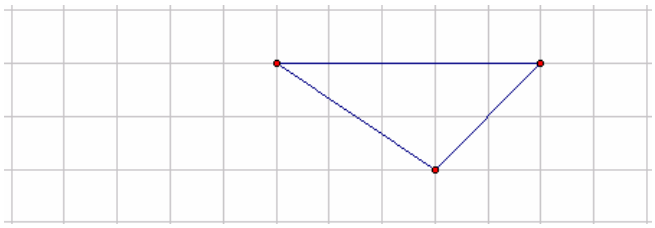
b)



2. Draw the translated image of the figure.

a) 2 squares right and 5 squares down **b)** 5 squares left and 1 square up





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Extra Practice 2

Lesson 2: Rotations

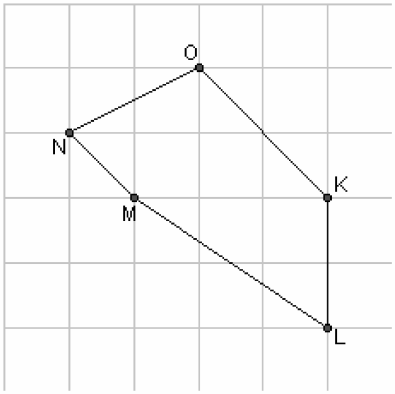
Copy this figure on grid paper.
Draw and label each image after each rotation.

a) $\frac{1}{4}$ turn counterclockwise about K

b) $\frac{3}{4}$ turn clockwise about M

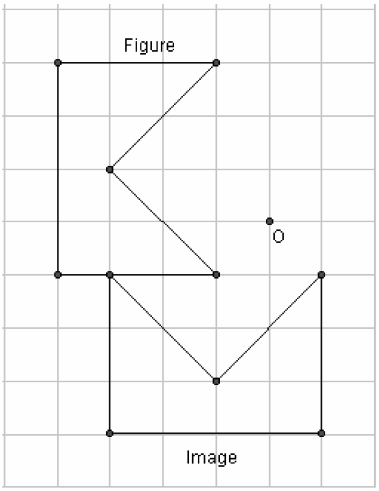
c) 180° counterclockwise turn about O

d) 90° clockwise turn about L

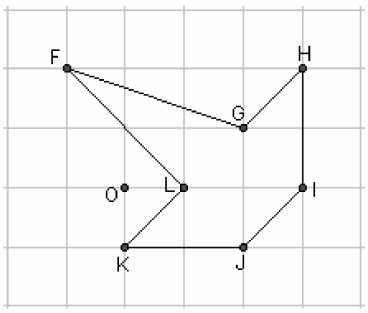


Lesson 3: Exploring Different Turn Centres

1. Look at the figure and its image, right.
- **a)** Suppose the figure was rotated clockwise. What was the angle of rotation?
- **b)** Suppose the figure was rotated counterclockwise. What was the angle of rotation?



2. Copy this figure on grid paper.
Draw the transformation after a 90° turn counterclockwise around O.



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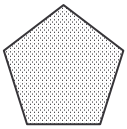
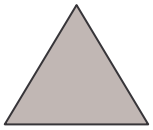
Extra Practice 3

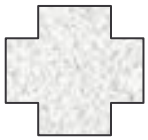
Lesson 5: Rotational Symmetry

1. Which figures have rotational symmetry?

a) 

b) 

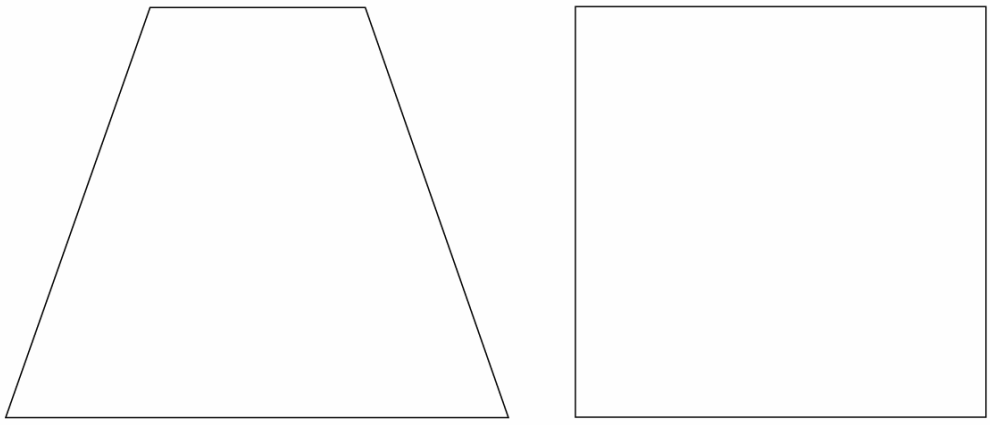
c) 

d) 

2. For each figure above that has rotational symmetry, write the order of symmetry.

Lesson 6: Exploring Tessellations

Use tracing paper.
Trace, then cut out, several copies of each quadrilateral.



Does the trapezoid tessellate? Does the square?
Explain.

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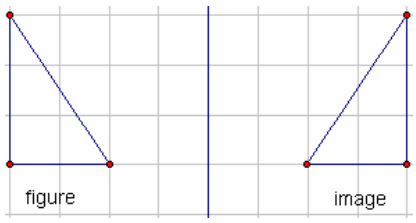
Extra Practice Answers

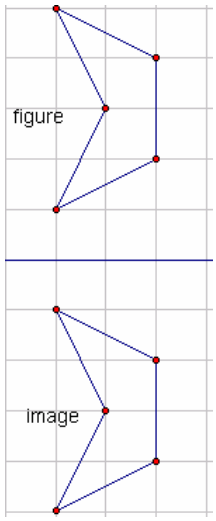
Extra Practice 1 – Master 7.20

Lesson 1

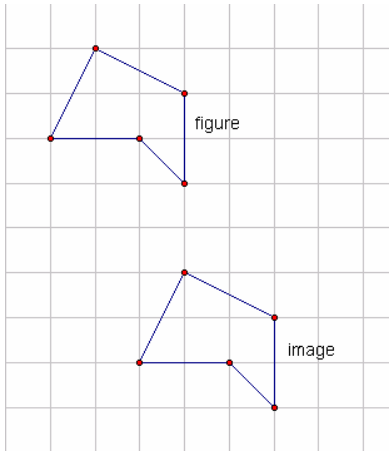
1. a)



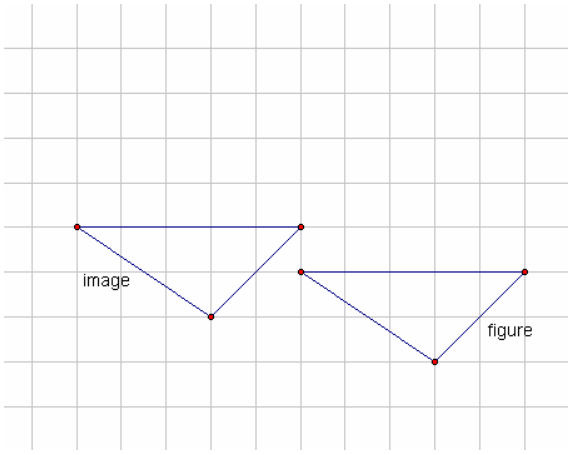
b)



2.a)

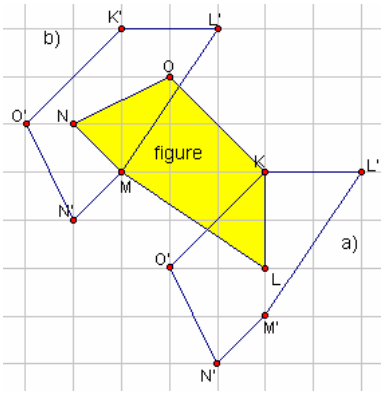


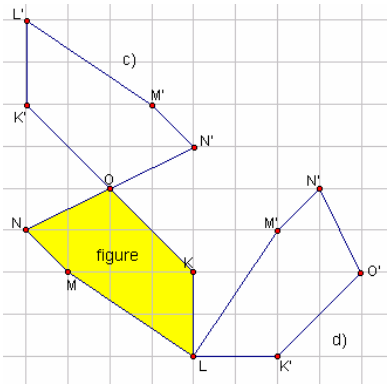
b)



Extra Practice 2 – Master 7.21

Lesson 2

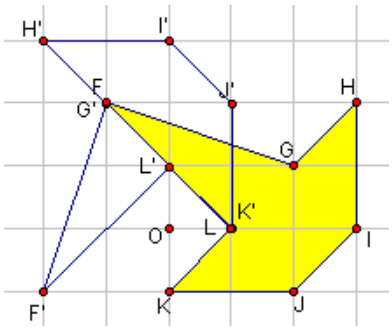




Lesson 3

1. a) 270° **b)** 90°

2.



Extra Practice 3 – Master 7.22

Lesson 5

1. b, c, and d have rotational symmetry

2. b) 5 **c)** 3 **d)** 4

Lesson 6

yes; yes