



Quick Review

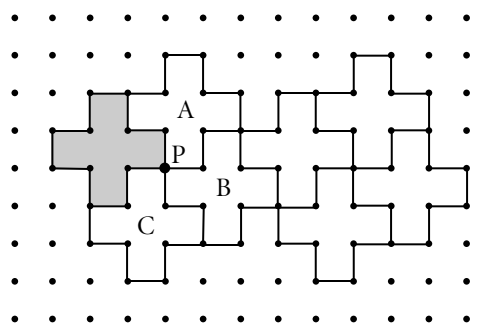
- ▶ A tessellation can be described using transformations of shapes.
- ▶ Under each transformation, the area of the shape does not change. This is known as **conservation of area**.
- ▶ A tessellation may be described by one or more than one type of transformation.

This tessellation can be described by translations or by rotations.
Start with the shaded shape.

To get Shape A, translate the shaded shape 2 units right and 1 unit up.

To get Shape B, translate the shaded shape 3 units right and 1 unit down.

To get Shape C, translate the shaded shape 1 unit right and 2 units down.



Alternatively:

To get Shape A, rotate the shaded shape 90° clockwise about point P.

To get Shape B, rotate the shaded shape 180° about point P.

To get Shape C, rotate the shaded shape 90° counterclockwise about point P.

You can make a tracing of the shaded shape and translate it or rotate it about point P to check these results.

To complete the tessellation, repeat these translations or rotations on the shaded shape.

Practice

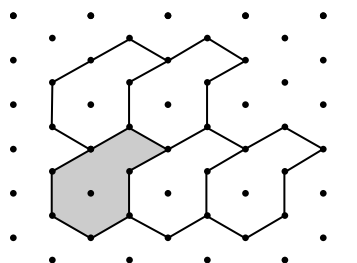
1. Identify the transformation in this tessellation.

Circle your answer.

translation

reflection

rotation



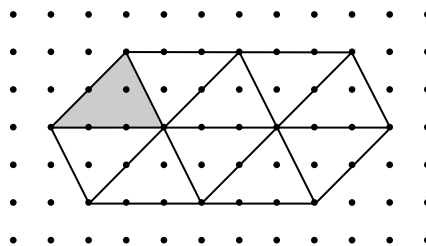
2. Identify the two transformations in this tessellation.

Circle your answer.

translation and reflection

translation and rotation

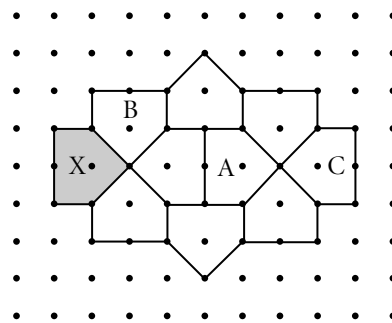
rotation and reflection



3. Identify the transformations in this tessellation.

Use these words or phrases to complete each sentence.

translation, reflection, rotation, vertical line, horizontal line, 4 units up, 4 units right, 90° , 180° , clockwise, counterclockwise

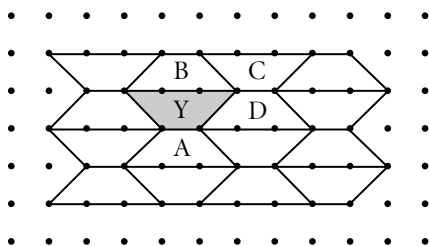


a) Shape A is a _____ of Shape X _____.

b) Shape B is a _____ of Shape X _____ about a point.

c) Shape C is a _____ of Shape X in a _____.

4. In the tessellation, Shape Y is the starting shape.



Describe the transformation needed to get to each of the lettered shapes.

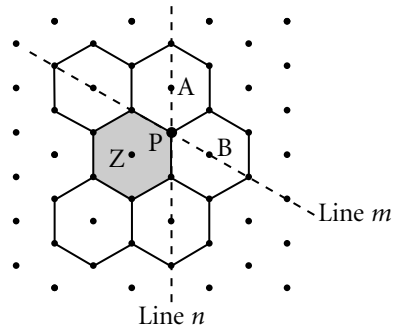
A: _____

B: _____

C: _____

D: _____

5. In the tessellation, Shape Z is the starting shape.



Describe as many different transformations as you can to get to each lettered shape.

A: _____

B: _____

6. Use this shape, or one of your own shapes, to create a tessellation on square dot paper. Identify the transformations you used.

