

# 12 Chapter Review

**Key Words**

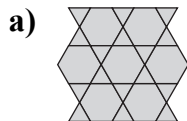
For #1 to #4, unscramble the letters for each puzzle.

Use the clues to help you.

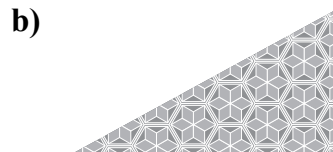
Clues	Scrambled Words	Answer
1. a 2-D flat surface that stretches in all directions	LENAP	_____
2. using repeated shapes of the same size to cover a region without spaces or overlapping	LITGIN THE EPALN	_____ _____ _____
3. a pattern that covers the plane without overlapping or leaving spaces	SLTIOEETANLS	_____
4. examples are translations, rotations, and reflections	RMTSAINFNOTAOR	_____

**12.1 Exploring Tessellations With Regular and Irregular Polygons, pages 646–651**

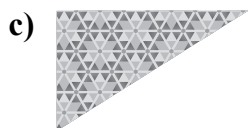
5. Name the polygons used to make each tiling pattern.



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. a) Explain the difference between a regular polygon and an irregular polygon.

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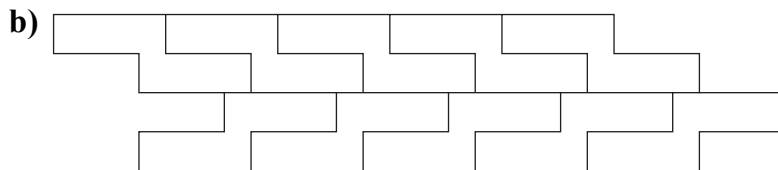
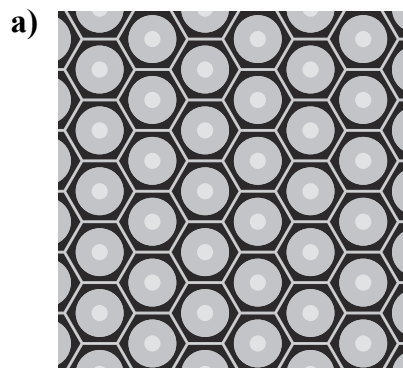
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b) Which polygon in #5 is a regular polygon? \_\_\_\_\_

c) Which polygon in #5 is an irregular polygon? \_\_\_\_\_

**12.2 Constructing Tessellations Using Translations and Reflections, pages 653–657**

7. What transformation(s) could be used to make the following patterns?

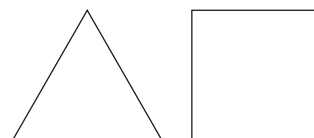
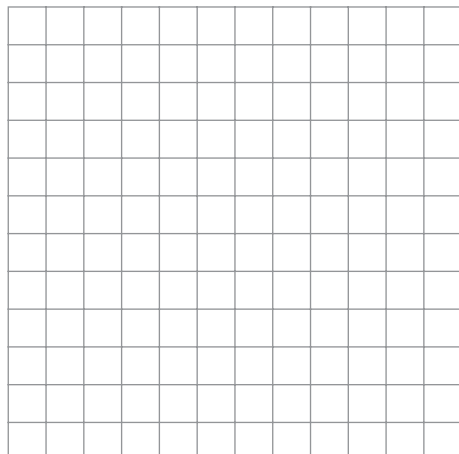


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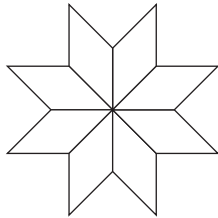
8. Make a tiling pattern using equilateral triangles and squares. Use 1 translation and 1 reflection to create the pattern.



**12.3 Constructing Tessellations Using Rotations, pages 659–662**

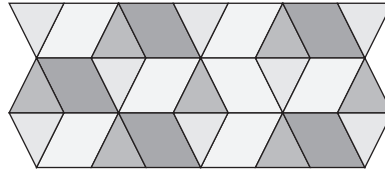
9. What transformations could be used to make the following patterns?

a)



\_\_\_\_\_

b)

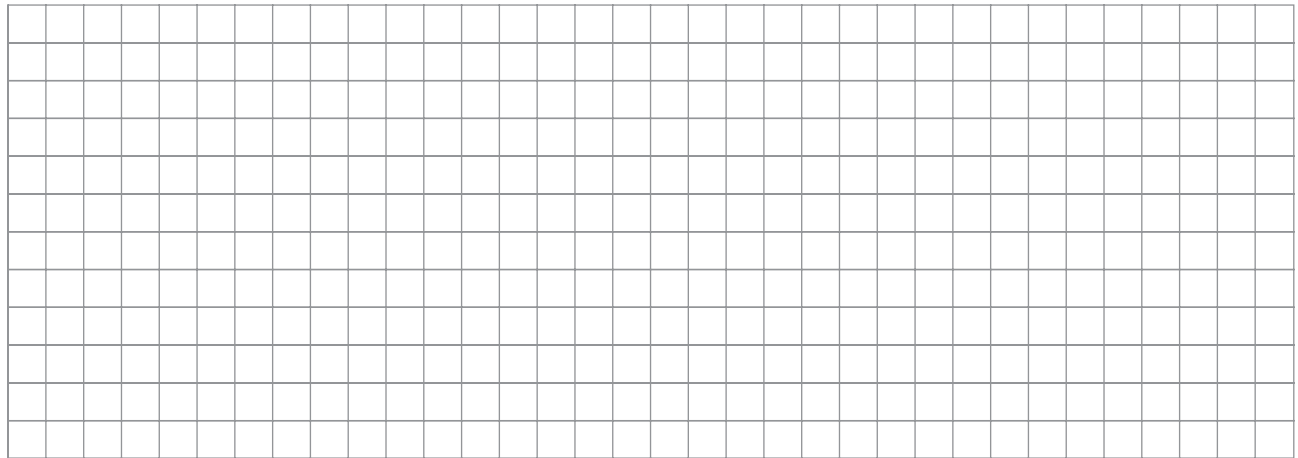
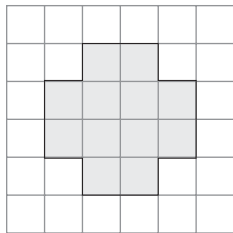


\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. Make a tessellation using this polygon.



Name the polygon that completes the pattern. \_\_\_\_\_.  
 Colour it blue.

**12.4 Creating Escher-Style Tessellations, pages 664–669**

11. This design is made up of 6 quadrilaterals.

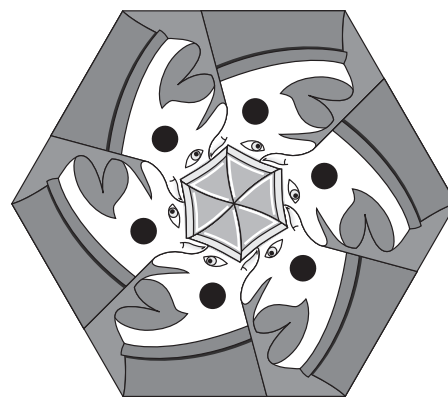
a) How many sides does a quadrilateral have?

\_\_\_\_\_

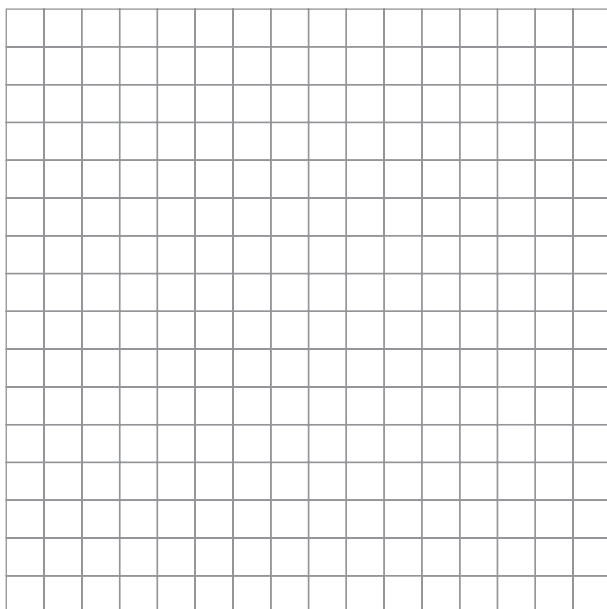
b) Highlight 1 of the quadrilaterals.

c) What transformation was used to make this tessellation?

\_\_\_\_\_



12. a) Make an Escher-style tessellation.  
Use only 1 shape.



b) Name the shape you used. \_\_\_\_\_

c) Name the transformation(s) you used. \_\_\_\_\_