Name: _____ Date: _____

Chapter 1 Review

For #1 to #6, choose the number that best matches the description.

1. line symmetry _____ another name for a reflection line

2. rotation symmetry _____ type of symmetry where the shape is divided into reflected halves

3. angle of rotation _____ the total area of all the faces of an object

4. surface area _____ type of symmetry where a shape is turned onto itself

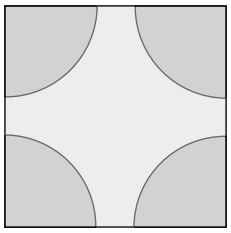
5. line of symmetry _____ number of times a shape fits onto itself in 1 turn

6. order of rotation _____ the size of turn for a shape to rotate onto itself

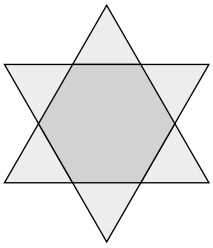
1.1 Line Symmetry, pages 6–14

7. Draw the lines of symmetry. Write the number of lines of symmetry for each design. Then, describe each line of symmetry using the terms *vertical*, *horizontal*, and *oblique*.

a)



b)



_____ ← Number of lines of symmetry → _____

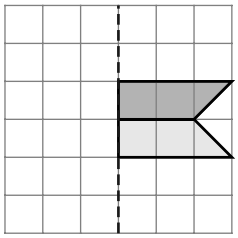
_____ ← Description → _____

_____ _____

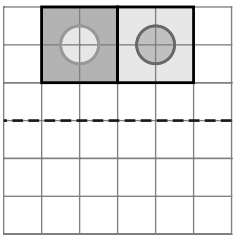
_____ _____

8. Half of a figure is drawn. The dashed line is the line of symmetry. Finish drawing each figure.

a)



b)



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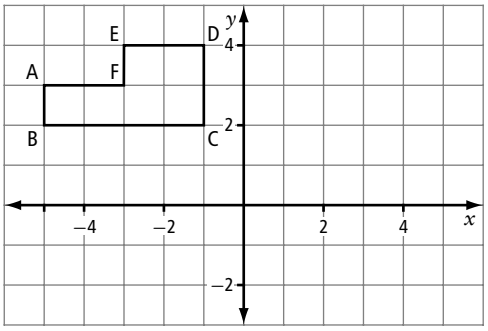
9. **a)** Draw a reflection of the shape in the *y*-axis.
Label the image A′, B′, C′, D′, E′, and F′.



b) Write the coordinates of the reflection image.

A′ (_____, _____) B′ _____

C′ _____ D′ _____

E′ _____ F′ _____

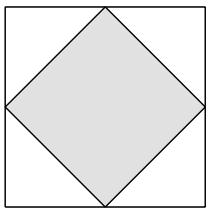
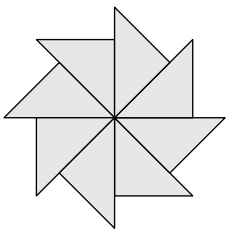
c) Using a different colour, translate the *original* shape R6, D3.
Label the image A″, B″, C″, D″, E″, and F″.

d) Which transformation shows symmetry? Circle REFLECTION or TRANSLATION.
Describe the symmetry using the terms *vertical*, *horizontal*, and *oblique*.

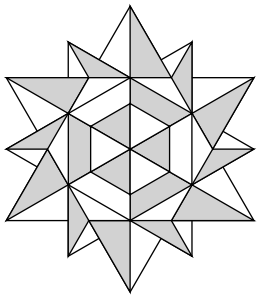
_____

1.2 Rotation Symmetry and Transformations, pages 16–24

10. Complete the chart for each diagram.

Diagram	Order of Rotation	Angle of Rotation (Degrees)	Angle of Rotation (Fraction of a Turn)
a) 		$\frac{360°}{\square} = \_\_\_\_$	$\frac{1}{\square}$
b) 			

11. What type of symmetry does the design have?
Circle ROTATION SYMMETRY or LINE SYMMETRY or BOTH.
Give 1 reason for your answer.



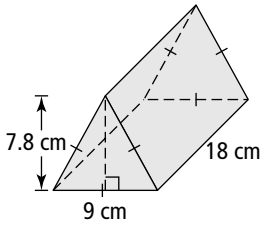
_____

_____

Name: _____ Date: _____

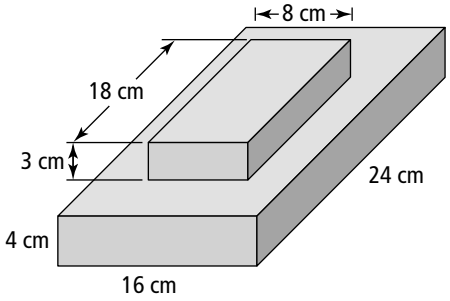
1.3 Surface Area, pages 26–35

12. The triangular prism has 1 triangular end fastened to the wall. All the other faces are showing.
What is the surface area of the faces that are showing?



Sentence: _____

13. Two blocks are placed 1 on top of the other.



a) If the blocks are separated, what is the surface area of each block?

Small Block:
Area of front or back: Area of top or bottom: Area of side:

Total surface area:

Large Block:
Area of front or back: Area of top or bottom: Area of side:

Total surface area:

b) What is the total surface area of the 2 blocks when separated?

Sentence: _____

c) What is the surface area of the stacked blocks?

(answer to part b) – (2 × area of shape where blocks touch)

Sentence: _____