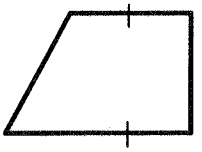
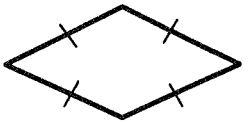
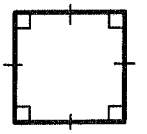
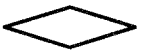
NAME _____ **DATE** _____

Classifying Quadrilaterals

A *quadrilateral* is any polygon that has 4 sides. There are many kinds of quadrilaterals, including:

Trapezoid: a quadrilateral with exactly 1 pair of parallel sides 	Rectangle: a quadrilateral with 2 pairs of parallel sides and 4 right angles 
Rhombus: a quadrilateral with 4 sides that are all the same length 	Square: a quadrilateral with 4 right angles and 4 sides that are all the same length 
Parallelogram: a quadrilateral with 2 pairs of parallel sides 	

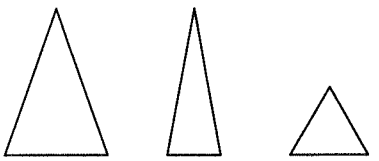
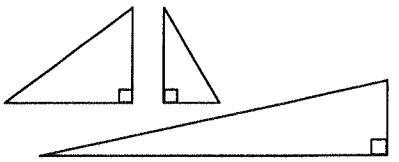
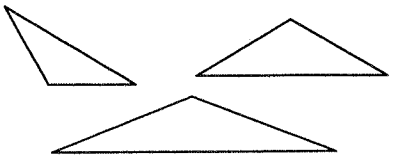
1 Look carefully at the figures below. Decide how many right angles, pairs of congruent sides, and pairs of parallel sides each has. Then circle the word or words that say what kind of figure it is. You might circle more than one word for some figures.

Figure	Right Angles?	Pairs of Congruent Sides?	Pairs of Parallel Sides?	Circle the word(s) that describe(s) the figure.
a 				trapezoid rectangle rhombus square parallelogram
b 				trapezoid rectangle rhombus square parallelogram
c 				trapezoid rectangle rhombus square parallelogram

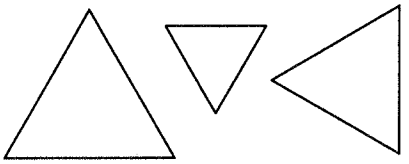
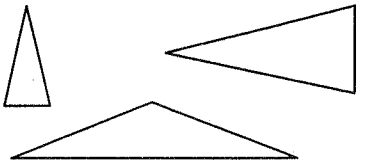
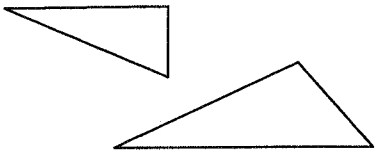
NAME _____ **DATE** _____

Classifying Triangles

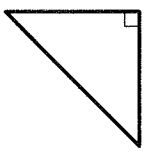
You can group triangles by the size of their angles.

Acute triangles All 3 angles are acute.	Right triangles 1 angle is a right angle.	Obtuse triangles 1 angle is an obtuse angle.
		

You can also group triangles by the lengths of their sides.

Equilateral triangles All 3 sides are the same length.	Isosceles triangles 2 sides are the same length.	Scalene triangles No sides are the same length.
		

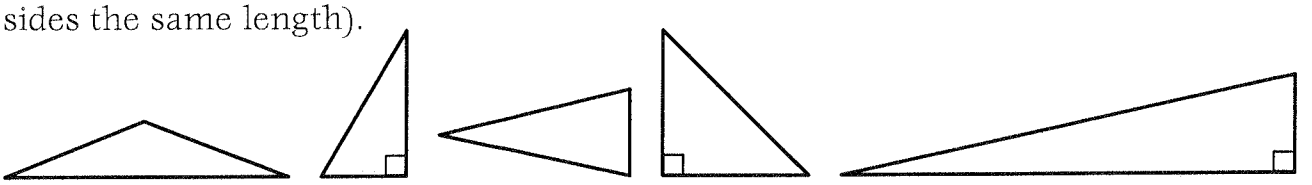
1 Look carefully at the triangles below and fill in the chart.

Triangle	Acute Angles?	Right Angles?	Obtuse Angles?	Congruent Sides?	What Kind? (circle as many as apply)
a 					acute equilateral right isosceles obtuse scalene
b 					acute equilateral right isosceles obtuse scalene

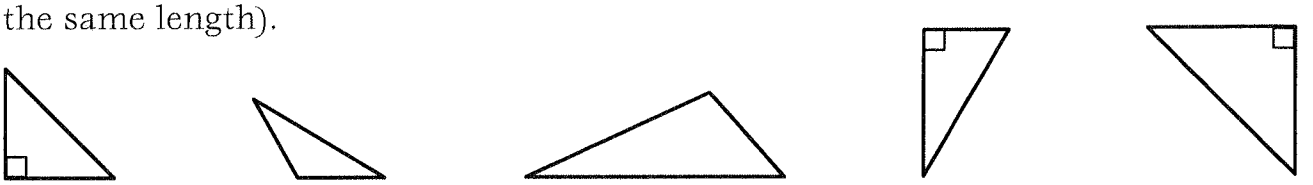
NAME _____ DATE _____

Identifying & Drawing Triangles

1 Circle the *right triangle* (one right angle) that is also an *isosceles triangle* (two sides the same length).

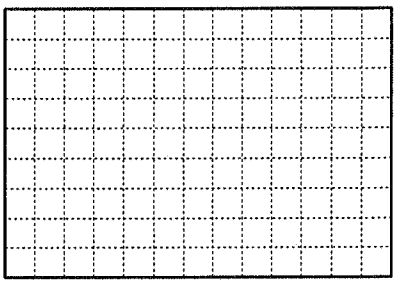


2 Circle the *right triangle* (one right angle) that is also a *scalene triangle* (no sides the same length).

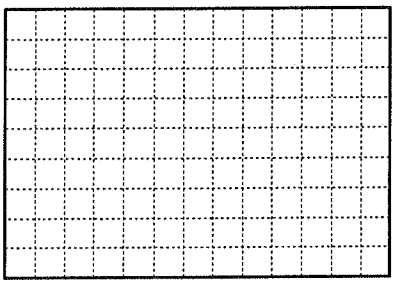


3 Draw the triangles described below.

a An obtuse isosceles triangle

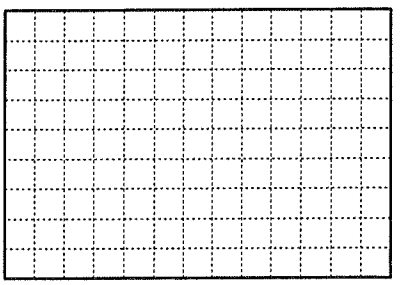


b An acute isosceles triangle



CHALLENGE

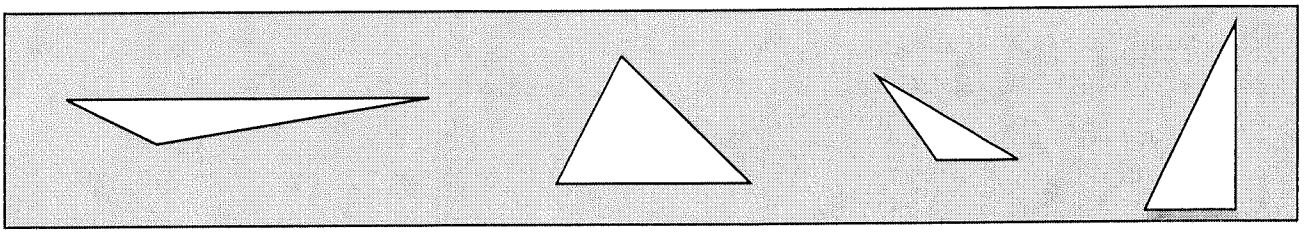
4 Lawrence said he drew a right obtuse triangle. Rosa said that was impossible. Explain why Rosa is correct.

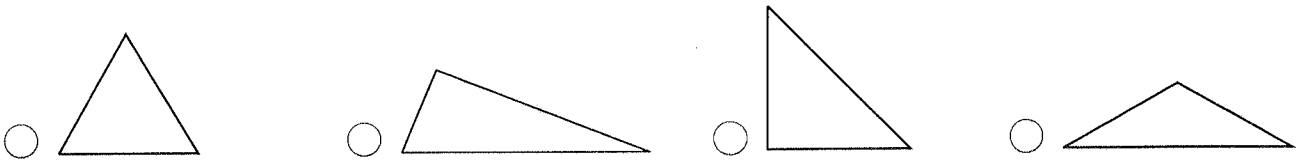


NAME _____ DATE _____

Classifying Triangles & Quadrilaterals

1a All of the triangles in the box have something in common. Fill in the circle next to the triangle that belongs with them.

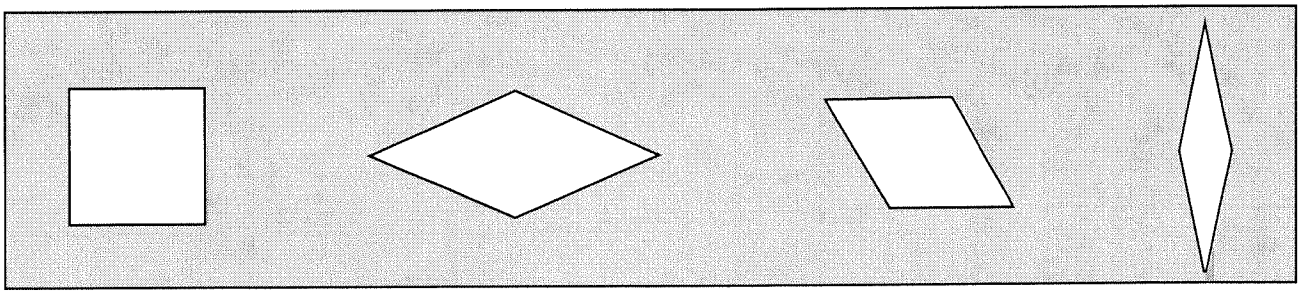


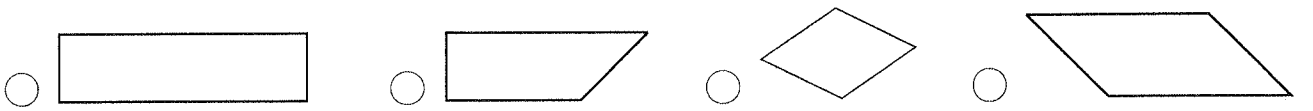


b How do you know the triangle you picked belongs in the group?

c What is the name for this kind of triangle?

2a All of the quadrilaterals in the box have something in common. Fill in the circle next to the quadrilateral that belongs with them.





b How do you know the quadrilateral you picked belongs in the group?

c What is the name for this kind of quadrilateral?

11-1

Name _____ Date _____

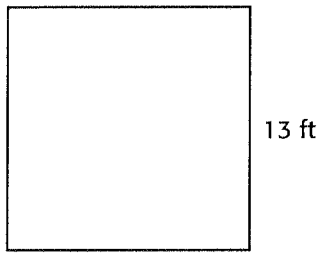
Homework Practice

5MG1.4

Perimeter

Find the perimeter of each square or rectangle.

1.

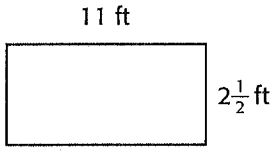


_____

2.

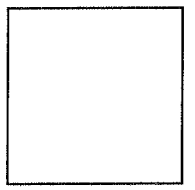
_____

3.



_____

4.



_____

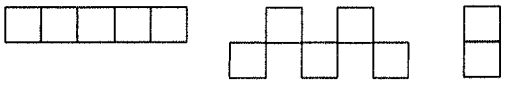
5. Neil made a wooden, rectangular picture frame that is 14 inches long and 10 inches wide. If he charges $2.50 per foot, how much will he sell this frame for?

_____

Spiral Review

Draw a three-dimensional figure whose top, front, and side views are shown. (Lesson 10–8)

6.



_____

14-3

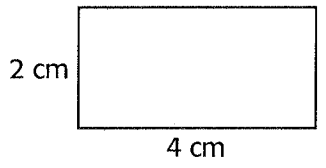
Name _____ Date _____

Homework Practice

Areas of Rectangles

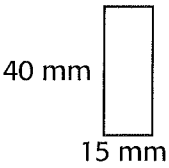
Find the area of each rectangle.

1.



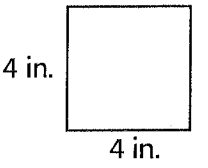
_____

2.



_____

3.



_____

4. rectangle

$\ell = 3$ yd

$w = 4$ yd

_____

5. rectangle

$\ell = 4$ in.

$W = 5$ in.

_____

6. rectangle

$\ell = 32$ mm

$w = 46$ mm

_____

Find the unknown width.

7. rectangle

$\ell = 3$ in.

$A = 6$ square inches

$w =$ _____

8. rectangle

$\ell = 45$ mm

$A = 3{,}150$ square millimeters

$w =$ _____

Spiral Review

Solve.

9. Mike's room is 12 feet by 15 feet. How many square feet of carpeting does he need to cover the entire floor?

_____

10. Helen is planting tomatoes in her garden. She can place 3 plants per square foot. How many plants does she need if her garden measures 7 ft by 6 ft?

_____

1-9

Name _____ Date _____

Homework Practice

5AF1.2, 5MG1.4

Algebra: Area Formulas

Solve.

1. Find the area of a square with a side length of 14 inches.

_____

Find the area of each rectangle.

2. 

_____

3. 

_____

Find the area of the following squares and rectangles.

4. a square with sides of 5 ft _____
5. a rectangle with a length of 13 inches and a width of 3 inches _____
6. a square with sides of 8 ft _____
7. a rectangle with a length of 14 inches and a width of 4 inches _____
8. a square with sides measuring 9 ft _____

Spiral Review

Solve each equation. (Lesson 1-8)

9. $m + 15 = 27$ _____
10. $n + 35 = 42$ _____
11. $7b = 35$ _____
12. $g \div 3 = 4$ _____
13. $4p = 16$ _____
14. $12 \div c = 6$ _____
15. $y - 5 = 24$ _____
16. $r - 7 = 2$ _____

11-2

Name _____ Date _____

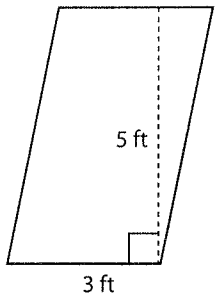
Homework Practice

5MG1.1, 5MG1.4

Area of Parallelograms

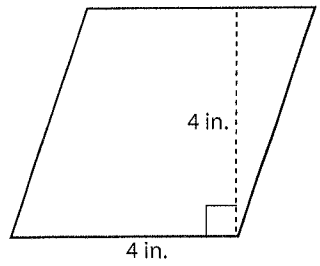
Find the area of each parallelogram.

1.



_____

2.



_____

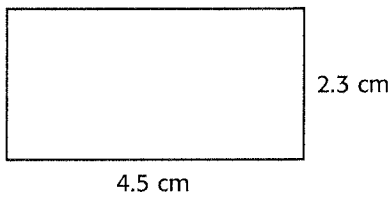
3. What is the area of a parallelogram with a base of 20 inches and a height of 8.5 inches?

_____

Spiral Review

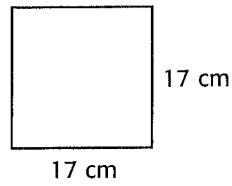
Find the perimeter of each square or rectangle. (Lesson 11-1)

4.



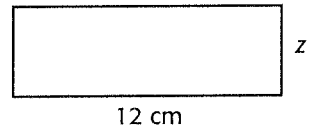
_____

5.



_____

6. What is the measurement of z if the perimeter of the rectangle is 30 cm?



_____

14-4

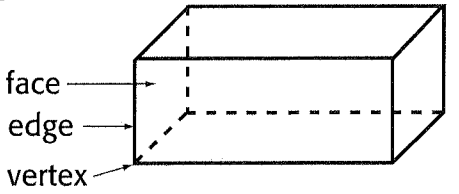
Name _____ Date _____

Homework Practice

Geometry: Three-Dimensional Figures

Describe parts of each figure that are perpendicular and congruent. Then identify the figure.

1.



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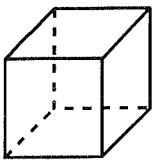
_____

2.



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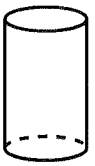
_____

3.



_____

_____

Spiral Review

Find the area of each rectangle. (Lesson 14–3)

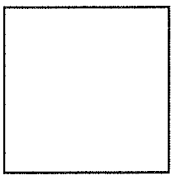
4.

_____

5.

_____

6.



_____

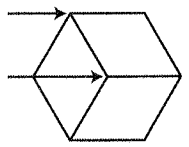
NAME _____ DATE _____

Faces, Edges & Vertices

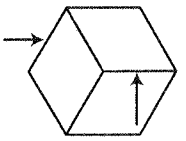
1 Use each word one time to show what part of the cube the arrows are pointing to in each picture.

edges faces vertices

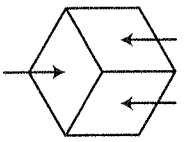
a _____



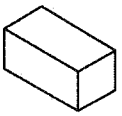
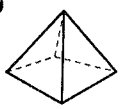
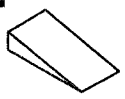
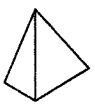
b _____



c _____



2 Fill in the table to describe and name each three-dimensional figure.

	Faces	Edges	Vertices	Shape Name
ex 	6	12	8	cube
a 				
b 				
c 				
d 				
e 				
f 				

14-7

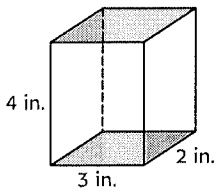
Name _____ Date _____

Homework Practice

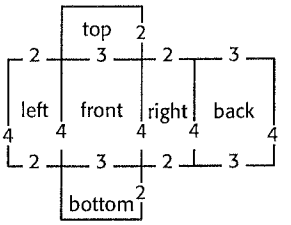
Surface Areas of Prisms

The **surface srea** (*SA*) of a 3-dimensional figure is the sum of the area of all its faces.

A rectangular prism has 6 faces.



Unfold the prism to examine the 6 faces.



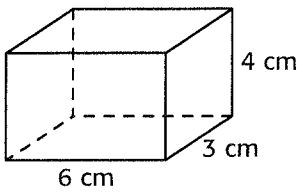
Find the area of each of the 6 faces, and add.

Face	Area	In.^{2}
front	3 × 4	12
back	3 × 4	12
top	3 × 2	6
bottom	3 × 2	6
left	2 × 4	8
right	2 × 4	8
	Total	52

The surface area of this rectangular prism is 52 in.^{2}

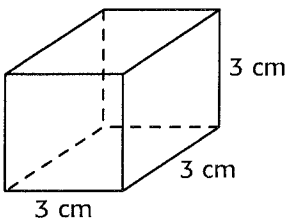
Find the surface area of each figure.

1.



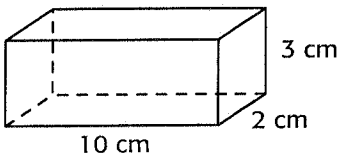
_____

2.



_____

3.

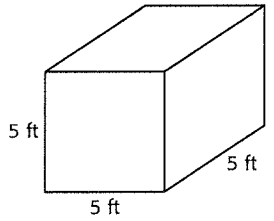


_____

Spiral Review

Find the volume of each prism. (Lesson 14–6)

4.



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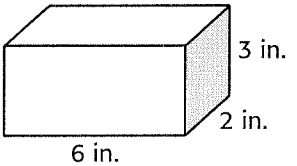
5.



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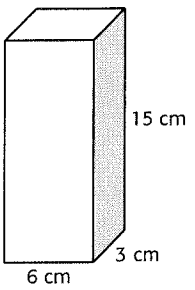
6.



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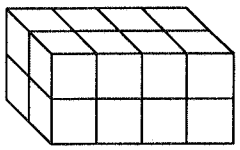
NAME _____ DATE _____

Surface Area & Volume

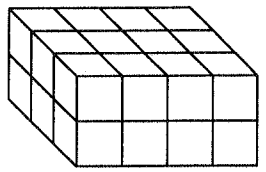
1 Each figure below is built out of centimeter cubes. Find the surface area and volume of each one.

ex



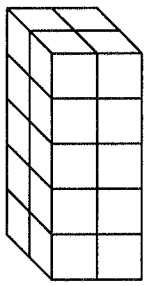
Surface Area	Volume
$2 \times 2 \times 2 = 8$ $4 \times 2 \times 4 = 32$ $8 + 32 = 40$ sq. cm.	$2 \times 2 \times 4 =$ 16 cubic cm.

a



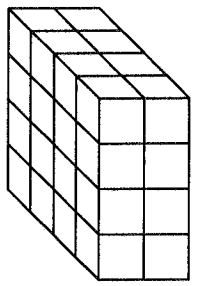
Surface Area	Volume

b



Surface Area	Volume

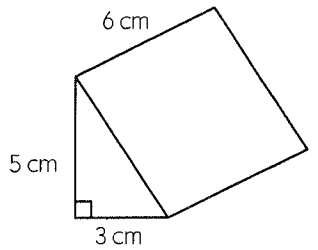
c



Surface Area	Volume

CHALLENGE

2 Find the volume of this triangular prism.



10–8

Name _____ Date _____

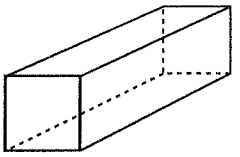
Homework Practice

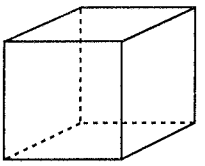
5MG2.3

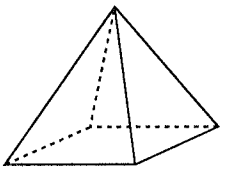
Drawing Three-Dimensional Figures

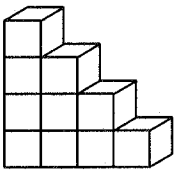
Chapter Resources

Draw a top, a side, and a front view of each figure.

1. 

2. 

3. 

4. 

Spiral Review

Find the value of *x* in each quadrilateral. (Lesson 10–7)

5. 65°, 125°, 80°, *x*

6. 85°, 65°, 105°, *x*

7. 90, 90, *x*°, 90

8. 120°, 60°, 120°, *x*°

11-6

Name _____ Date _____

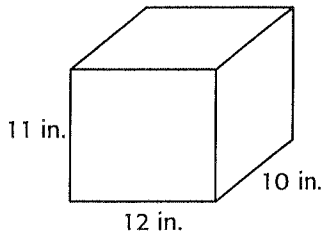
Homework Practice

5MG1.3, 5MG1.4

Volume of Rectangular Prisms

Find the volume of each prism.

1.



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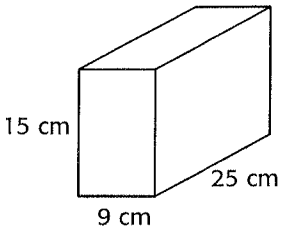
2.



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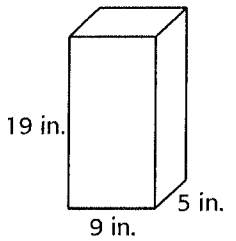
3.



_____

4. What is the volume of a rectangular box that has a base of 50 in^2 and a height of 12 inches?

_____

5. Bernice made a rectangular wooden tool box that has a base of 50 cm^2 and a height of 35 cm. What is the volume?

_____

Spiral Review

Use any strategy to solve. (Lesson 11-5)

6. Ali has a loaf of bread that he needs to slice for his family's dinner. How many cuts does he need to make if he needs 6 equal-size slices of bread?

_____

7. Maggie's older sister is repaying her student loans. Her loans, including interest, total $9,985. How much are her monthly payments if she plans to repay the loans in 8 years?

_____

11-7

Name _____ Date _____

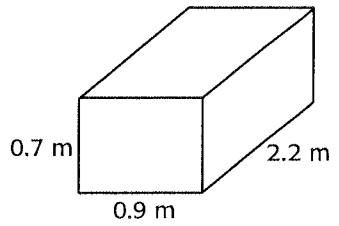
Homework Practice

5MG1.2

Surface Area of Rectangular Prisms

Find the surface area of each rectangular prism.

1.



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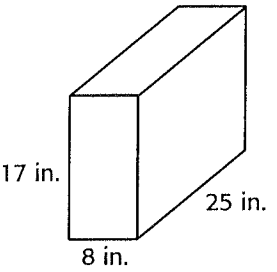
2.



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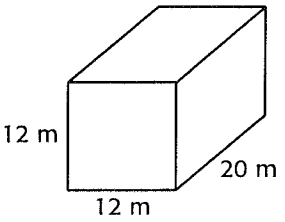
3.



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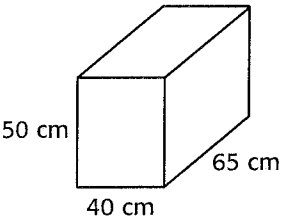
4.



_____

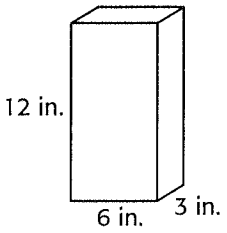
5. Alejandra wants to find the surface area of her aquarium. It does not have a top, and it measures 30 inches long by 20 inches high by 14 inches wide. What is the surface area?

_____

Spiral Review

Find the volume of each prism. (Lesson 11–6)

6.



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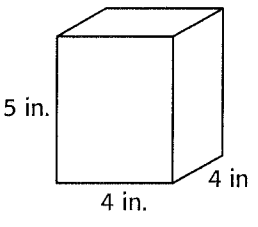
7.



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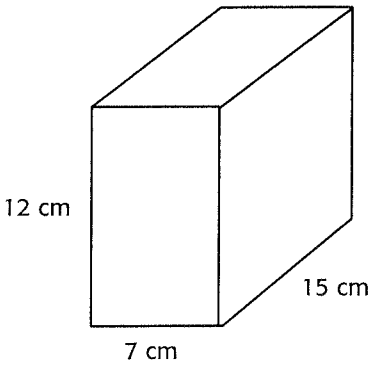
8.



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