Name _____ Date _____

Find the surface area.

1.

2 in.
5 in.
3 in.

_____

2.

6 m
6 m
6 m

_____

3.

10 ft
4 ft
8 ft

_____

4.

3 in.   5 in.
4 in.

_____

5.

9 cm
3 cm
3 cm

_____

6.

2 yd
4 yd
3 yd

_____
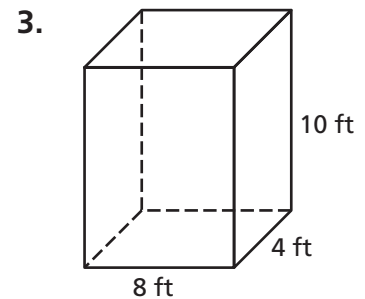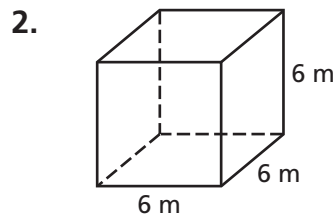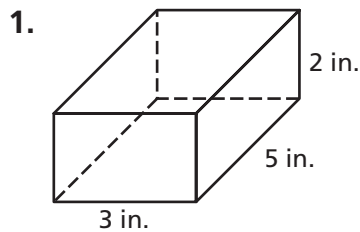
Solve.

7. All the faces of an antique candle box in the shape of a rectangular prism have been painted. The candle box has a length of 25 in., a width of 10 in., and a height of 8 in. What is the total area that was painted?

Show your work.

_____

8. Cara made a sewing box in the shape of a rectangular prism. Its length is 14 in., its width is 8 in., and its height is 6 in. Cara plans to cover the box with fabric. The fabric comes in 14 in. squares. How many squares does she need to cover all the faces with no overlap?

_____

Name _____ **Date** _____

Remembering

Solve.

1. Gerrard is illustrating a children's book. He includes 36 pictures in a book with 45 pages. If he uses the same ratio of pictures to pages, how many pictures will he include if the book has 15 pages?

_____

2. Mrs. Lyn is buying wood for a baseboard in the room shown. Then she is going to install wall-to-wall carpeting. How much wood does Mrs. Lyn need? How much carpeting?

16.4 ft

8 ft

11.8 ft

13 ft

5 ft

40.2 ft

_____
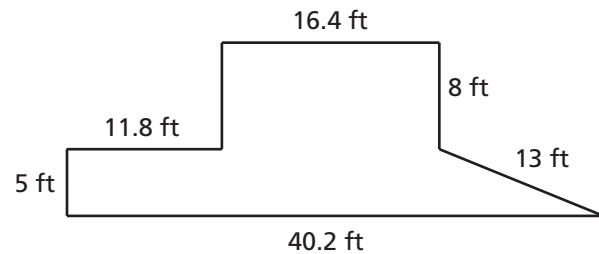
Write equivalent fractions. Then compare, add, multiply, and divide the numbers from left to right. Subtract the lesser number from the greater number.

3.	$\frac{5}{9}$ $\frac{3}{5}$ $\rightarrow$	
4.	>, <	
5.	+	
6.	•	
7.	÷	
8.	−	

9.	$1\frac{5}{6}$ $2\frac{3}{10}$ $\rightarrow$	
10.	>, <	
11.	+	
12.	•	
13.	÷	
14.	−	

15. **Stretch Your Thinking** Jason is making a toy box in the shape of a rectangular prism. Jason sketches one net. Then he draws another net that has double the dimensions of the first net. How do the surface areas compare? Explain.
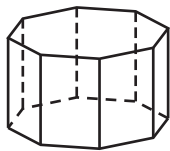
_____

_____

_____

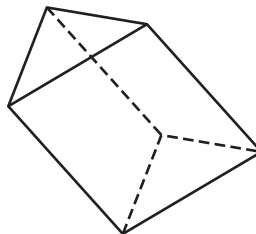Nets and Surface Area for Rectangular Prisms

Name the prism.

1.

2.

3.

_____
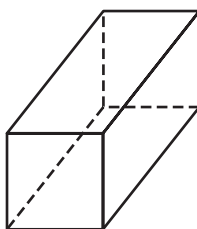
_____

_____

4.

5.

6.
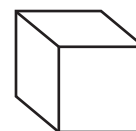
_____

_____

_____
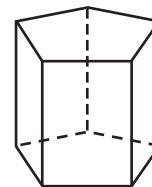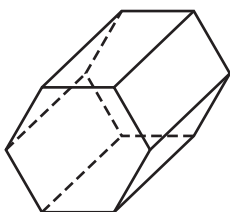
Complete.

7. Will this net form an octagonal prism? Explain.

   _____

8. The base of a square prism has an area of 16 in.^{2} The
   height of the prism is 6 in. What is the surface area
   of the square prism?

   _____

9. The perimeter of the base of a regular octagonal prism is
   8 ft. What is the width of a rectangular side of the prism?

   _____

10. The base of a triangular prism has an area of 6 cm^2. The
    height of the prism is 5 cm. The width of the rectangular
    faces are 3 cm, 4 cm, and 5 cm. What is the surface area of
    the triangular prism?

    _____

Name _____ **Date** _____
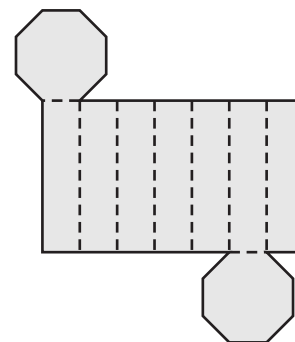
Remembering

Solve.

1. Lorraine can give 3 customers haircuts in 2 hours. How long will it take her to give 12 customers haircuts?

   _____

Complete.

2. $\frac{5}{6} + \frac{7}{10}$

   _____

3. $56.77 + 23.47$

   _____

4. $1.2 \bullet 22.3$

   _____

5. $1\frac{4}{5} \div \frac{2}{3}$

   _____

6. $607.3 - 122.9$

   _____

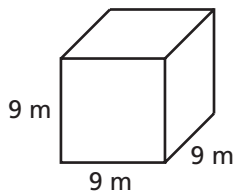7. $1\frac{2}{9} - \frac{5}{9}$

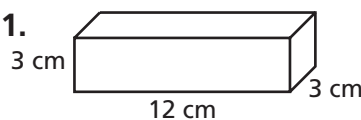   _____

8. $134.1 \div 3$

   _____

9. $15.4 + 55.6$

   _____

Find the surface area.
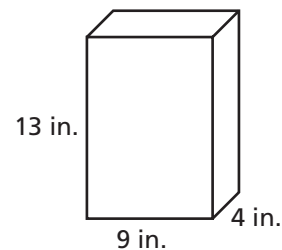
10.

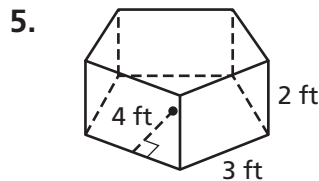9 m
9 m
9 m

_____

11.

3 cm
12 cm
3 cm

_____

12.

13 in.
9 in.
4 in.

_____
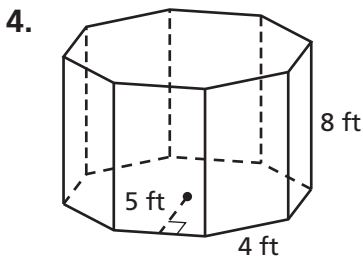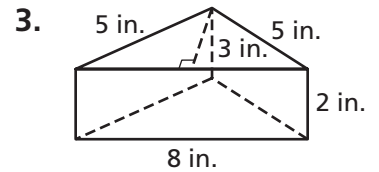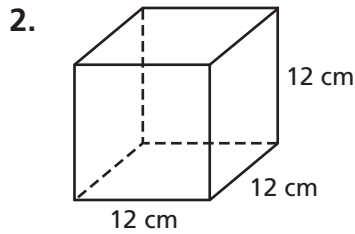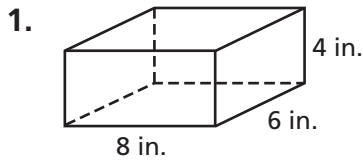
13. **Stretch Your Thinking** Herga makes boxes for games that she has invented. She makes a box for one game. Then she makes a box with dimensions that are one third the dimensions of the first box. What is the relationship between the surface areas of the boxes? Explain.

   _____

   _____

   _____

Nets and Surface Area for Nonrectangular Prisms

Find the surface area.

1.

4 in.
6 in.
8 in.

_____

2.

12 cm
12 cm
12 cm

_____

3.

5 in.   3 in.   5 in.
2 in.
8 in.

_____

4.

8 ft
5 ft
4 ft

_____

5.

2 ft
4 ft
3 ft

_____

6.

4 in.
4 in.
5 in.

_____
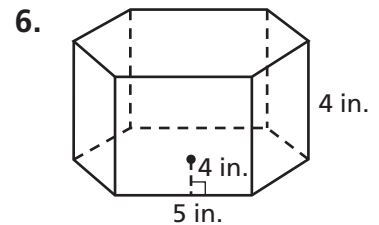
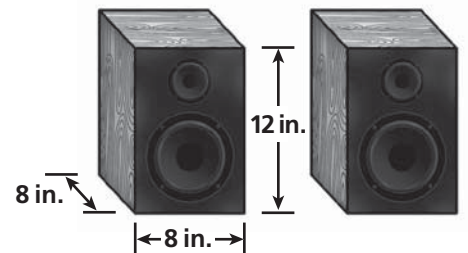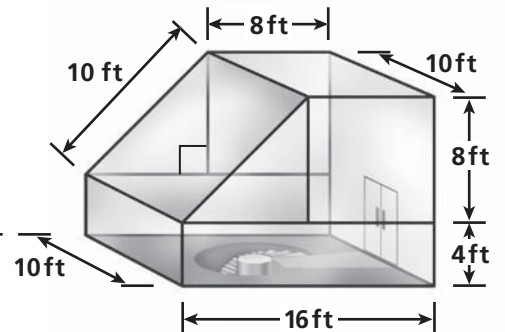**Solve.**

7. Jesse bought the speakers shown at the right. All faces of the speakers except the front faces are wood. How many square inches of wood were used to make the speakers?

12 in.
8 in.
8 in.

_____

8. The glass entry way to a basement store is shown at the right. How many square feet of glass were used to make the entry way?

8 ft
10 ft
10 ft
8 ft
4 ft
10 ft
16 ft

_____

Name _____ **Date** _____

Remembering

Solve.

1. At Pet Foods, dog food costs $10 for 5 pounds. At Buydogfood.com, the dog food costs $9 for 3 pounds. At which store is the food less expensive?
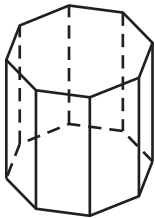
_____

_____
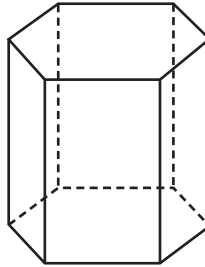
_____

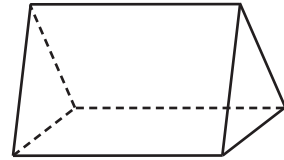**Name the prism.**

2.

_____

3.

_____

4.

_____

5. The perimeter of the base of a pentagonal prism is 45 cm. What is the width of the rectangular side of that prism?

_____

6. The area of the base of a triangular prism is 60 ft². The height of the prism is 3 ft. If the widths of the rectangular faces are 8 ft, 15 ft, and 17 ft, what is the surface area of the triangular prism?

_____

7. Stretch Your Thinking Jerome has a block of craft foam shaped like a square prism. He cuts the foam block in half. Jerome thinks that because the surface area of the original block was 358 in.², the surface area of each piece is 179 in.² Is he correct? Explain.
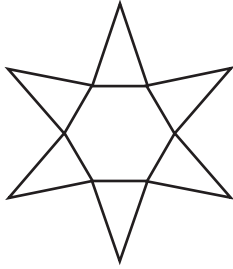
_____

_____

Surface Area of Prisms

These nets form pyramids.
Use the shape of the base to name the pyramid.

1.

_____

2.

_____

3.

_____

4.

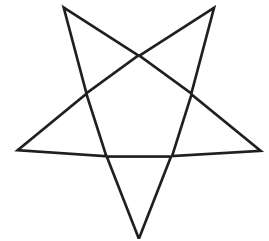

_____

5.

_____

6.

_____
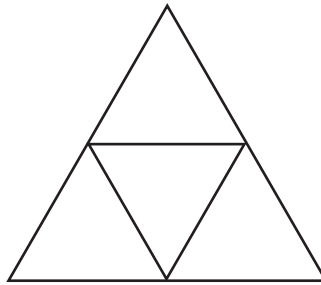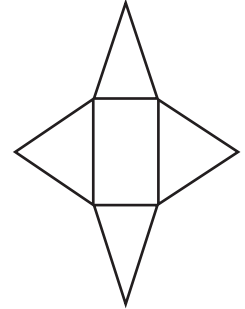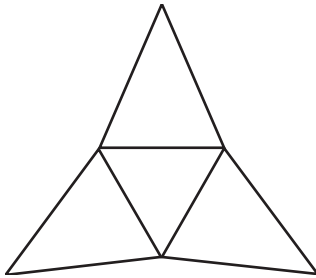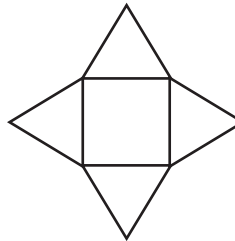
Complete.

7. Will this net form a triangular pyramid? Explain.

_____

8. The perimeter of the base of a hexagonal pyramid is 48 in. The base is a regular polygon. What is the length of the base of one of the triangular faces?
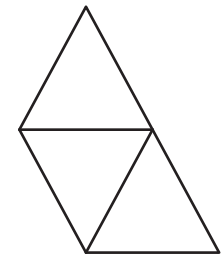

_____

9. Vinnie found the area of a triangle with a base of 5 in. and a height of 6 in. to be 30 in.² What error did he make?

_____

10. Explain how you know how many triangular faces any pyramid will have?

_____

_____

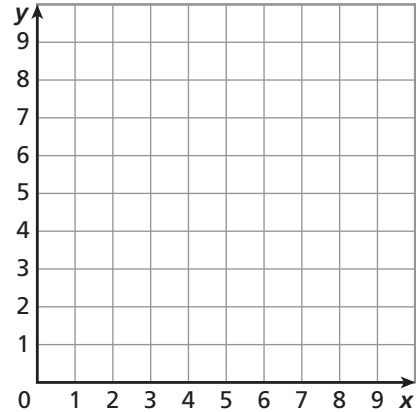**Name** _____ **Date** _____

Remembering

Solve.

1. Sammy can read 20 pages in 5 minutes. At this rate, how many pages can she read in 1 minute?
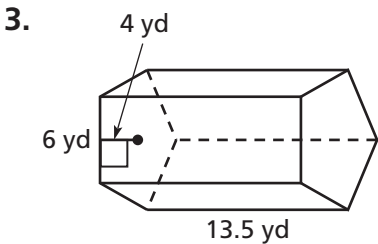
   _____

2. Plot these ordered pairs: *A*(2, 4) and *B*(2, 8). Plot point *C* so that when you draw lines to form triangle *ABC* the base of the triangle has a length of 3 units. If segment *BC* is 5 units long, what is the perimeter and area of triangle *ABC*?
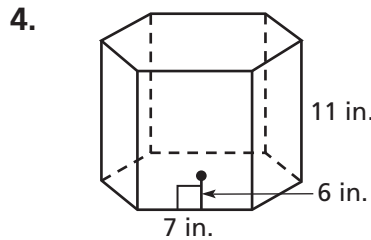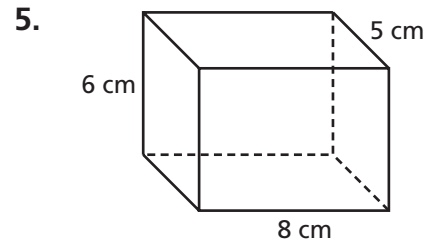
   P = _____

   A = _____

Find the surface area.

3.

4 yd
6 yd
13.5 yd

_____

4.

11 in.
6 in.
7 in.

_____

5.

5 cm
6 cm
8 cm

_____

6. **Stretch Your Thinking** Marian glued together the wooden blocks as shown. Then she painted the faces of the blocks. How many square inches of paint did she use? Explain how you found your answer.
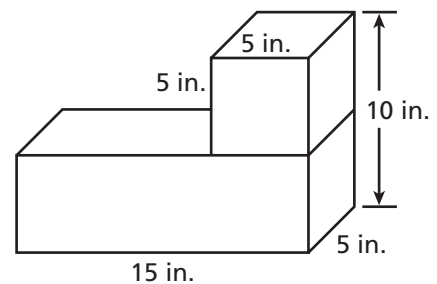

5 in.
5 in.
10 in.
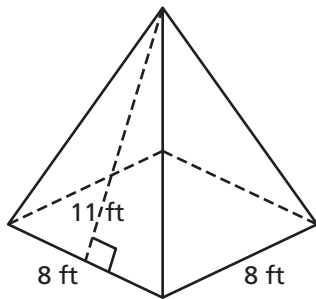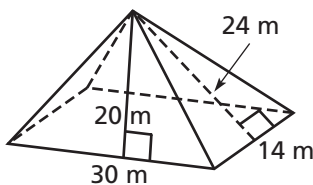5 in.
15 in.

   _____

   _____

   _____

   _____

   _____

Nets for Pyramids

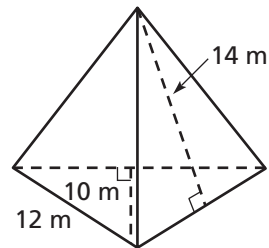**Find the surface area. The bases of the pyramids in Exercises 1, 3, 4, 5, and 6 are regular polygons.**

1.

11 ft

8 ft   8 ft

_____

2.

24 m

20 m

30 m   14 m

_____

3.

14 m

10 m

12 m

_____

4.

10 in.

6 in.

7 in.

_____

5.

10 ft

20 ft

8 ft

_____

6.

12 cm

7 cm

10 cm

_____
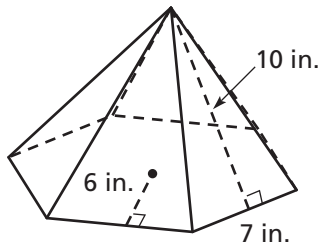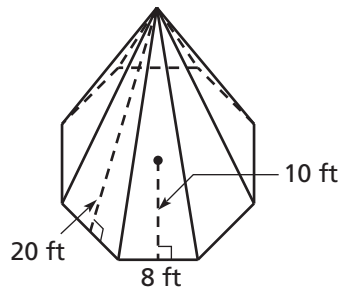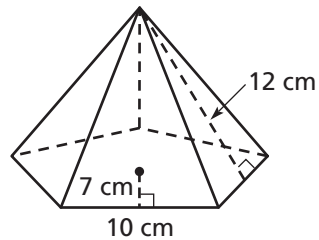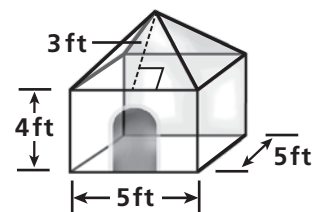
Solve.

7. The surface area of a square pyramid is 112 ft². If the length of each edge of the base is 8 ft., what is the slant height of each triangular face?

_____

8. The roof of this doghouse is a square pyramid. Each triangular face is 3 ft. high. If Jamal paints the roof and the sides, including the door, how much area will he paint?

3 ft
4 ft
5 ft
5 ft

_____

Name _____ **Date** _____

Remembering

Solve.

1. Barry collects $24 for every 6 newspaper subscriptions he sells. How much would he collect for 8 newspaper subscriptions?

_____

Complete.

2. $\begin{array}{r} 56 \\ \times\ 1.2 \\ \hline \end{array}$

3. $\begin{array}{r} 456 \\ +\ 443 \\ \hline \end{array}$

4. $\begin{array}{r} 2{,}334 \\ -\ \ \ 976 \\ \hline \end{array}$

5. $\begin{array}{r} \frac{10}{11} \\ +\ \frac{1}{2} \\ \hline \end{array}$

6. $\frac{2}{3} \cdot \frac{3}{4}$

7. $34.5 \div 0.5$

8. $\frac{2}{5} \div 1\frac{1}{5}$

9. $\frac{5}{6} - \frac{1}{3}$

_____   _____   _____   _____

Name the shape of the base and use it to name the pyramid
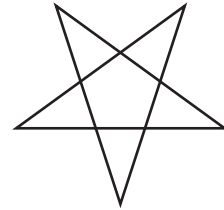
10.
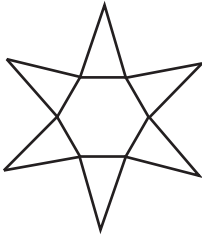
11.
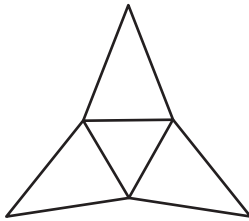
12.

_____   _____   _____

_____   _____   _____

13. **Stretch Your Thinking** What is the least number of faces that a pyramid can have? Explain.

_____

_____

_____

_____

     Surface Area of Pyramids

Gina wants to make a pyramid container to hold popcorn.

1. Sketch below a small net for a pyramid container that will hold popcorn. Label the net with the actual dimensions you would like your container to have.

2. Use your net to find the surface area of your popcorn pyramid container.

_____

Remembering

Solve.

1. Mr. O'Neil can buy a box of 8 pens for $24 at the ABC store. He can buy a box of 6 pens for $12 at the XYZ store. Mr. O'Neil wants to buy the pens for the lowest possible price. At which store should he buy the pens?
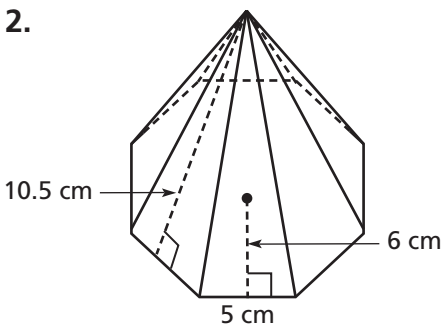
_____

_____
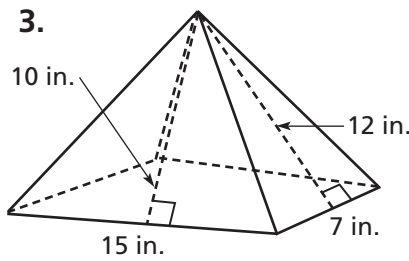
_____

Name the pyramid. Then find the surface area.

2.

10.5 cm —

6 cm

5 cm

_____

_____

3.

10 in.

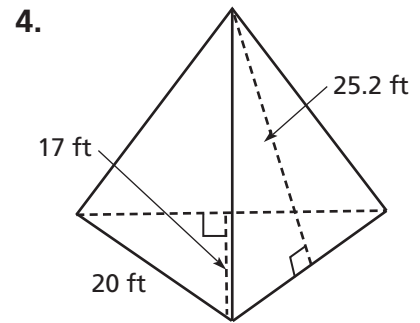12 in.

15 in.
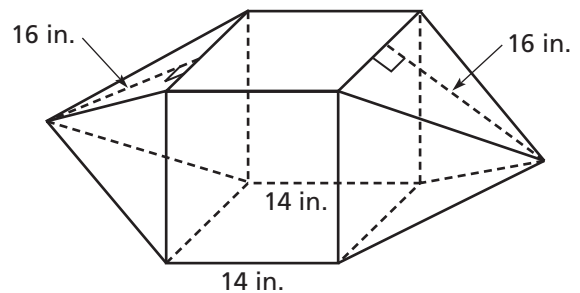
7 in.

_____

_____

4.

25.2 ft

17 ft

20 ft

_____

_____

5. **Stretch Your Thinking** Millie made the marble sculpture shown. She will treat the outside faces of the sculpture with marble protectant. How many square inches of the sculpture need to be treated? Explain how you found your answer.

16 in.

16 in.

14 in.

14 in.

_____

_____

_____

Focus on Mathematical Practices