Name_____ Date_____

9.1 Practice A

Find the surface area of the prism.
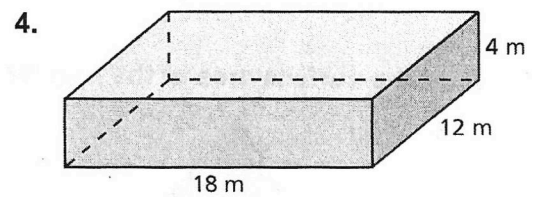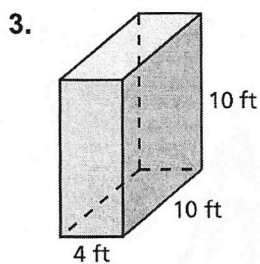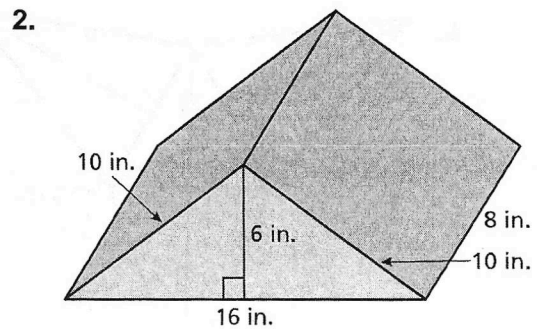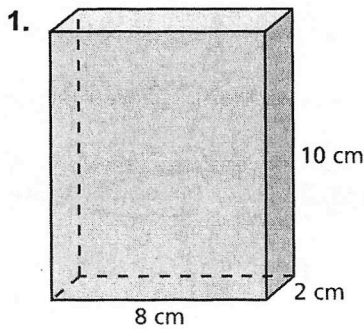
1.

10 cm
2 cm
8 cm

2.

10 in.
6 in.
8 in.
10 in.
16 in.

3.

10 ft
10 ft
4 ft

4.

4 m
12 m
18 m

5.

24 in.
40 in.
10 in.
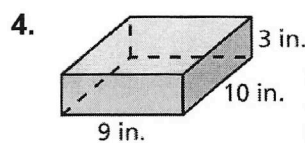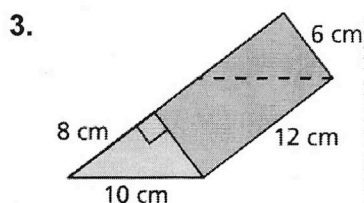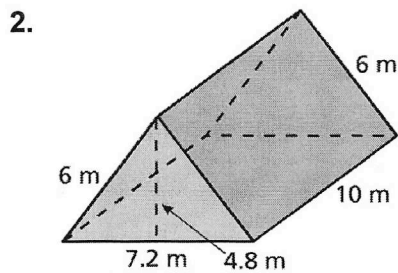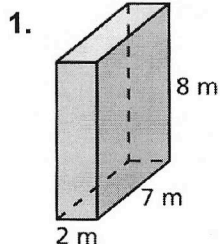26 in.

6.

12 cm
16 cm
4 cm
20 cm
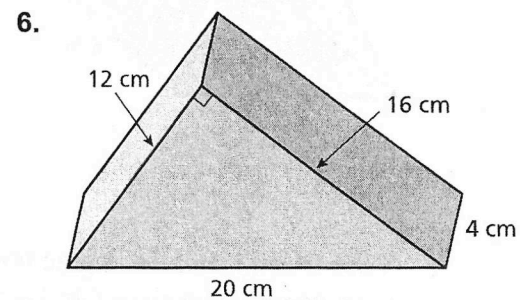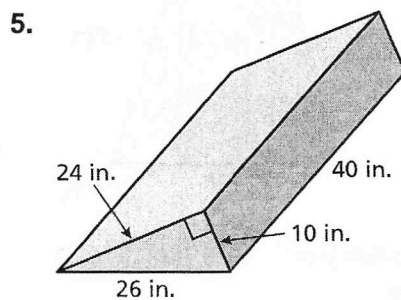
7. The inside of a baking pan is to be lined with tinfoil. The pan is 12 inches long, 9 inches wide, and 1.5 inches tall. How many square inches of tinfoil are needed?

8. Draw and label a rectangular prism that has a surface area of 96 square meters.

Name _____ Date _____

Find the surface area of the prism.

1.

8 m
7 m
2 m

2.

6 m
6 m
10 m
7.2 m   4.8 m

3.

6 cm
8 cm
12 cm
10 cm

4.

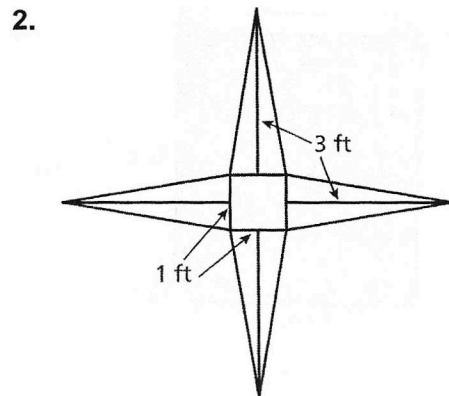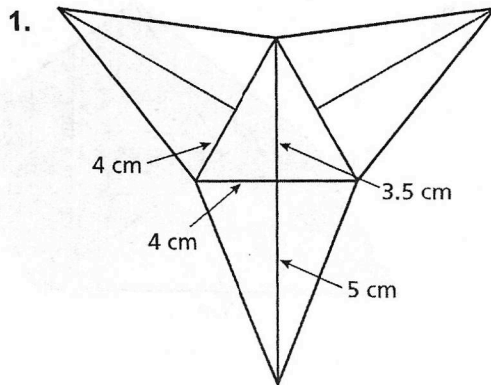3 in.
10 in.
9 in.

5. You buy a ring box as a birthday gift that is in the shape of a triangular prism. What is the least amount of wrapping paper needed to wrap the box?
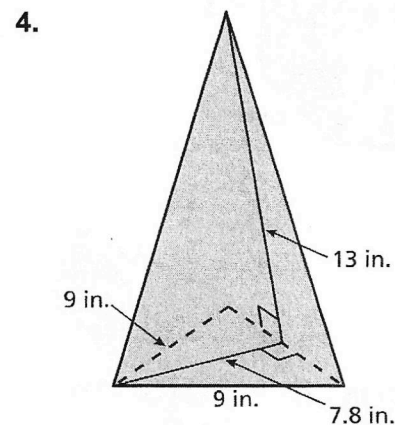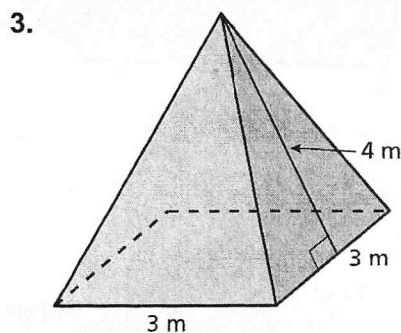
14.5 cm
8 cm
10 cm   10.5 cm

Name_____ Date_____
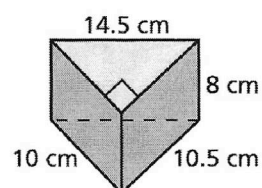
9.2 Practice A

Use the net to find the surface area of the regular pyramid.

1.

4 cm

3.5 cm

4 cm

5 cm

2.

3 ft

1 ft

Find the surface area of the regular pyramid.

3.

4 m

3 m

3 m

4.

13 in.

9 in.

9 in.

7.8 in.

5. Your friend is purchasing an umbrella with a slant height of 4 feet. There are a variety of such umbrellas to choose from.

   a. A red umbrella is shaped like a regular pentagonal pyramid with a side length of 3 feet. Find the lateral surface area of the red umbrella.

   b. A yellow umbrella is shaped like a regular hexagonal pyramid with a side length of 2.5 feet. Find the lateral surface area of the yellow umbrella.

   c. A blue umbrella is shaped like a regular octagonal pyramid with a side length of 1.9 feet. Find the lateral surface area of the blue umbrella.

   d. Based on lateral surface areas, would you suggest that your friend pick the umbrella that is her favorite color? Explain.
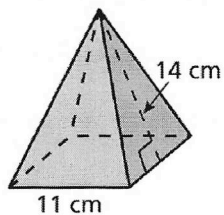
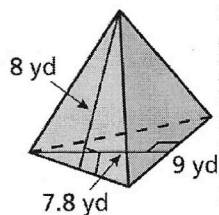Name _____ Date _____

Find the surface area of the regular pyramid.

1.

14 cm

11 cm

2.

8 yd

9 yd

7.8 yd

3.

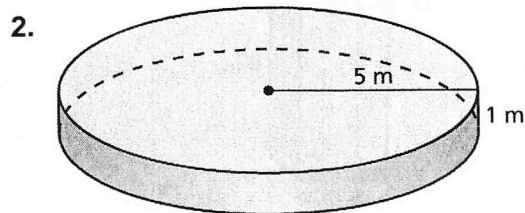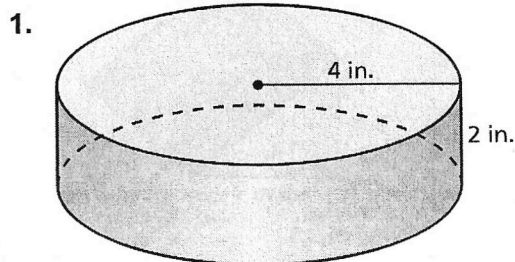12 ft

6 ft

5.2 ft

4.

30 m

13 m

Area of base
is 439.1 m².
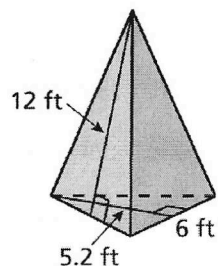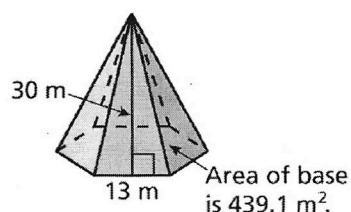
5. The surface area of a triangular pyramid is 305 square inches. The area of the base
is 35 square inches. Each face has a base of 9 inches. What is the slant height?

Name_____ Date_____

9.3 Practice A

Make a net for the cylinder. Then find the surface area of the cylinder. Round your answer to the nearest tenth.

1.

4 in.

2 in.

2.

5 m

1 m

Find the surface area of the cylinder. Round your answer to the nearest tenth.
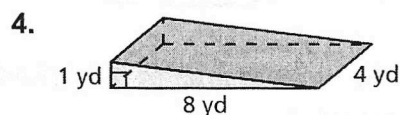
3.

4 ft

12 ft

4.

8 mm

3 mm

Find the lateral surface area of the cylinder. Round your answer to the nearest tenth.

5.

3 cm

3 cm

6.

9 yd

1 yd
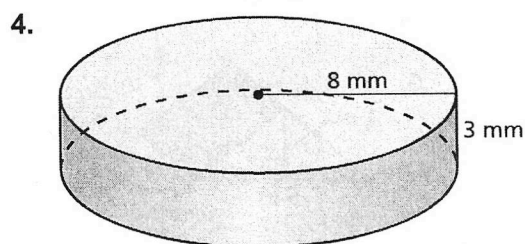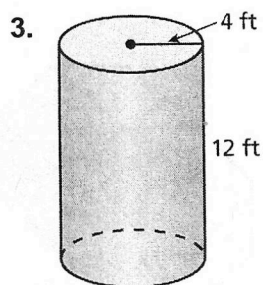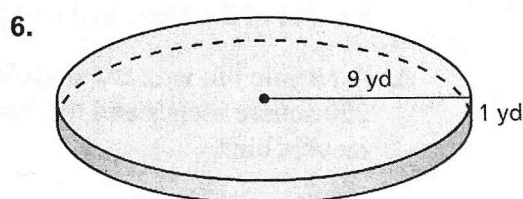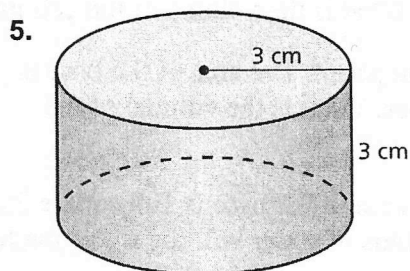
7. A deep dish pizza has a radius of 6 inches and a height of 1 inch. Find the surface area of the pizza. Round your answer to the nearest tenth.
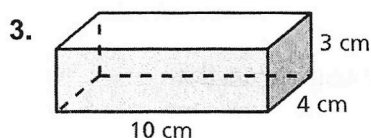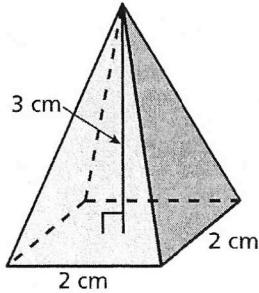
Name_____ Date_____

9.4 Practice A

Find the volume of the prism.

1.

6 in.
2 in.
3 in.

2.

5 m
9 m
6 m

3.

3 cm
4 cm
10 cm

4.

1 yd
4 yd
8 yd

5.

2 in.
3 in.
5 in.

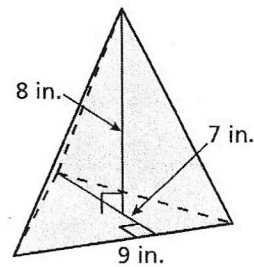**6.**

$B = 50 \text{ m}^2$
6 m
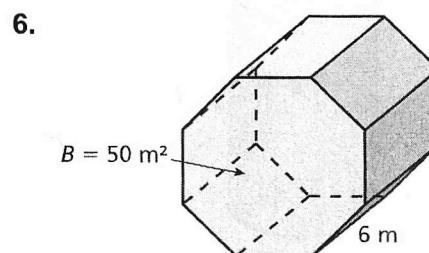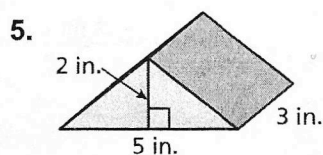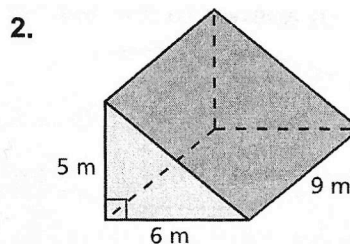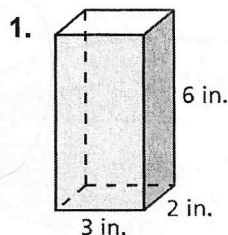
7. A cell phone is in the shape of a rectangular prism, with a length of 4 inches, a width of 2 inches, and a height of 1 inch. What is the volume of the cell phone?

8. A recycle bin is in the shape of a trapezoidal prism. The area of the base is 220 square inches and the height is 24 inches. What is the volume of the recycle bin?

9. A water jug is in the shape of a prism. The area of the base is 100 square inches and the height is 20 inches. How many gallons of water will the water jug hold? $\left(1 \text{ gal} = 231 \text{ in.}^3\right)$ Round your answer to the nearest tenth.

Name_____ Date_____

9.5　Practice A

Find the volume of the pyramid.

1.

3 cm

2 cm

2 cm

2.

8 in.

7 in.
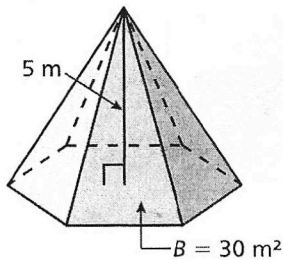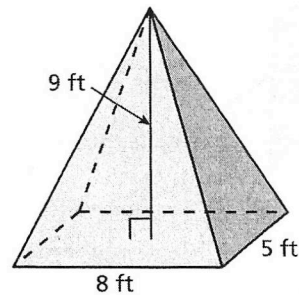
9 in.

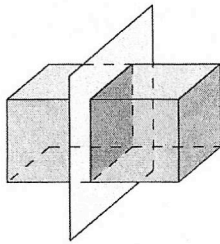**3.**

5 m

$B = 30$ m²

4.

9 ft

5 ft

8 ft

5. A tent is in the shape of a pyramid. The base is a rectangle with a length of 12 feet and a width of 10 feet. The height of the tent is 8 feet. Find the volume of the tent.

6. A sign made of solid wood is in the shape of a pyramid. The base is a triangle with a base of 6 feet and a height of 4 feet. The height of the sign is 7 feet. The wood costs $3 per cubic foot. What is the cost of the sign?

7. Two pyramids with square bases have the same volume. One pyramid has a height of 6 centimeters and the area of the base is 36 square centimeters.

a. What is the volume of the pyramids?

b. The base of the other pyramid has a side length of 3 centimeters. What is the height of this pyramid?

8. How does the volume of a pyramid change when the height is halved?
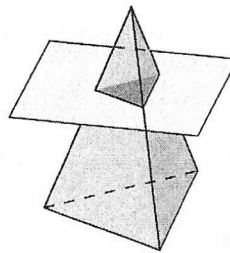
**Extension
9.5** **Practice**
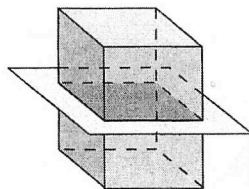
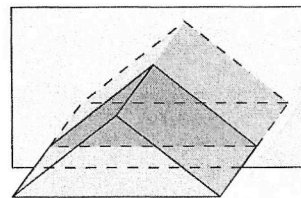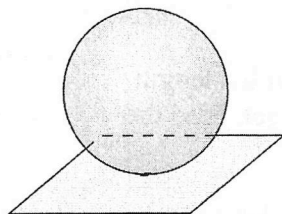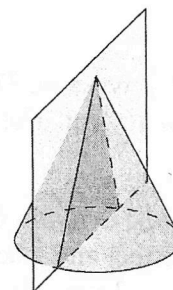**Describe the intersection of the plane and the solid.**

1.

2.

3.

4.

5.

6.

7.

8.