DCP #2 Review
Name ______________________

Pythagorean Theorem:
1. Find the missing side.

2. Which measurement is a right triangle?
   A. 13 in, 7 in, 8 in
   B. 15 yd, 8 yd, 7 yd
   C. 31 ft, 16 ft, 42 ft
   D. 20 cm, 12 cm, 16 cm

3. What is the perimeter of the right triangle?

4. A ladder that is 18 feet long leans against a building. The bottom of the ladder is 6 feet away from the base of the building. How far up the side of the building does the ladder reach?

5. Find the distance between the points A(4, 6) and B(1, 1)

6. Find the distance between the points B(-2, 2) and C(1, -5)
Volume:
1. A cylinder has a radius of 6 centimeters and a height of 41 centimeters. Find the volume.

2. A standard-size bass drum has a diameter of 24 inches and is 19 inches deep. Find the volume of five drums.

3. The cone of a volcano in Mexico had a height of 425 meters and a diameter of 440 meters. Approximate the volume.

4. The area of the base of a cylinder is 45 square inches and its height is 12 inches. A cone has the same area for its base and the same height. What is the cone’s volume?

5. Fossilized spherical dinosaur eggs were found. These eggs were 15 centimeters in diameter. Find the volume of an egg. Round your answer to the nearest tenth.

6. Hummingbirds lay eggs that are nearly spherical and about 1.4 centimeters in diameter. Find the volume of three eggs. Round your answer to the nearest tenth.
Surface Area:

Find the Total and Lateral surface area of the following figures:

1. 

![Diagram of a cylinder with dimensions 13 in and 7 in.]

2. 

![Diagram of a triangular prism with dimensions 16 cm, 20 cm, 12 cm, 10 cm, and 10 cm.]

3. 

![Diagram of a rectangular prism with dimensions 6 cm, 5 cm, and 11 cm.]

4. A pipe is 25 inches long and has a diameter of 5 inches. What is the lateral surface area of the pipe?

5. A wooden block has the following measurements. Juan wants to paint the entire block purple. If paint costs $0.52 per square centimeter, how much will it cost Juan to cover the wooden block?
Comparing Interest:
1. Kaitlyn received a gift of $2700 from her aunt and uncle. She decides to invest the money in a saving account for 4 years so that she will have the money available when she goes to college. Her bank offers two options:
   - Option 1: Interest calculated at 3% compounded annually
   - Option 2: Simple interest rate of 2.8%
Which option should Kaitlyn chose in order to earn the most interest?

2. Ruth and Luke each have $175 to invest in a saving account. Ruth chooses an account earns 3% simple interest. Luke chooses an account that earns 2.8% interest compounded annually. Ruth says that at the end of 5 years her account will have earned more in interest than Luke’s account. Is she correct? Explain your answer.

Interior/Exterior Angles:
1. Find the value of x and angle D.

2. Find the value of x.

3. Find angle n.
4. What is the measure of angle “B”?

![Triangle with angles 65° and 30°]

2. Which proportion shows that triangle ABD is similar to triangle ECD? (hint: redraw as two separate triangles)

A. \( \frac{\text{AB}}{\text{EC}} = \frac{\text{BC}}{\text{CD}} \)
B. \( \frac{\text{ED}}{\text{CD}} = \frac{\text{BC}}{\text{AD}} \)
C. \( \frac{\text{EC}}{\text{AB}} = \frac{\text{ED}}{\text{AD}} \)
D. \( \frac{\text{BD}}{\text{BC}} = \frac{\text{AD}}{\text{ED}} \)

1. Write a proportion and solve for the height of the tree.

![Tree and parallel lines diagram]

5. Which proportion shows that triangle ABC is similar to triangle DEF?

A. \( \frac{8}{y} = \frac{4}{6} \)
B. \( \frac{4}{6} = \frac{x}{7} \)
C. \( \frac{4}{x} = \frac{7}{6} \)
D. \( \frac{y}{x} = \frac{7}{8} \)