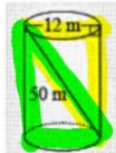# Day 3: Pythagorean Theorem within Shapes Lesson

Find the missing side length (hypotenuse) of a right triangle. Within the shape, find the right triangle. Then, use pythagorean theorem.
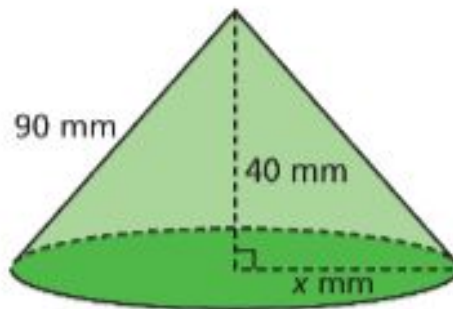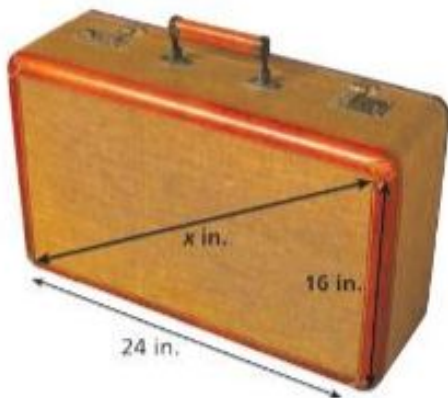
A 50 m rope is attached inside an empty cylindrical wheat silo of diameter 12m as shown. How high is the wheat silo?

$$a^2 + b^2 = c^2$$
$$a^2 + 12^2 = 50^2$$
$$a^2 + 144 = 2500$$
$$-144 \quad -144$$

2nd x^2 $\sqrt{a^2} = \sqrt{2356}$

$$a \approx 48.54 \text{ m}$$

Directions: Find the value of the unknown measurement in each shape. Show all of your work and round to the nearest hundredth.

x in.

16 in.

24 in.

90 mm

40 mm

x mm