

# 8th Grade Lesson 88

- I can find the area of a right solid.

LAUNCH

## Investigating a cylinder



**If you unwrapped the label on this can and laid it flat, what shape would it be?**

**What about the base and the lid?**

**LAUNCH**

## Surface area of a cylinder

The diagram shows a red cylindrical can on the left with a yellow label that says "SEASONED ITALIAN TOMATOES" and features a red tomato. To the right of the can are two grey circles labeled "Lid" and "Base", and a large red rectangle labeled "Label".

**How would you find the surface area of a cylinder?**

**CONCEPT**

## What is the length of the rectangle?

The diagram shows a red rectangle on the left and a red cylinder on the right. Small blue dots are placed at the top-right corner of the rectangle and the top-left edge of the cylinder, indicating they are of equal length.

Play   Pause   Rewind

$$C = 2\pi r$$

**CONCEPT**

## Surface area of a cylinder

**ANSWER**

**PRACTICE**

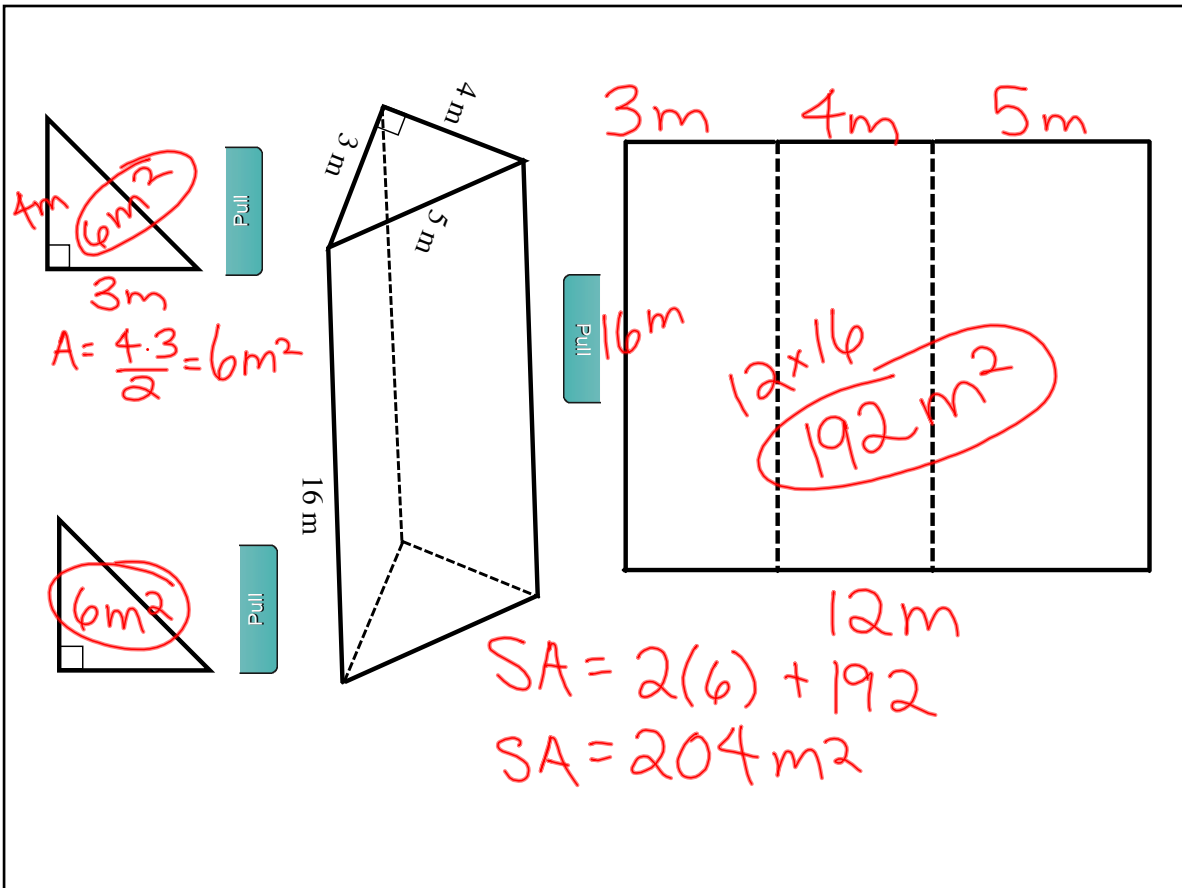
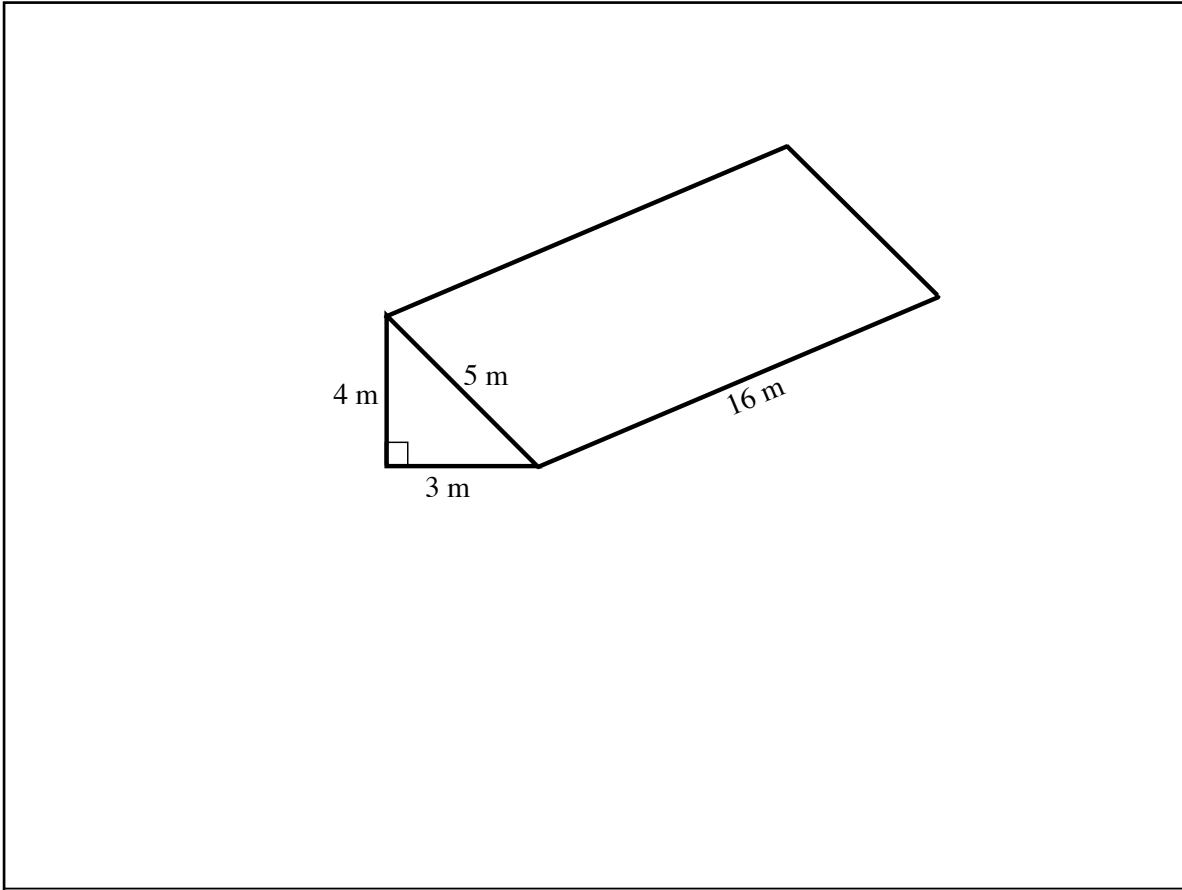
## Find the surface area of this cylinder

Area of base  $\rightarrow B = (r^2)(3.14)$   
 $= 50.24 \text{ in}^2$

L.A. =  $301.44 \text{ in}^2$

S.A. =  $2B + \text{L.A.}$   
 $= 2(50.24) + 301.44$   
S.A. =  $401.92 \text{ in}^2$

$C = (2r)h$   
 $(8)(12) = 96$   
 $96 \times 3.14 = 301.44$



6

8 ft

3 ft

8 ft

Pull

10 ft

6 8 9.42 8

Pull

10 ft

31.42

$\frac{1}{2}\text{circle} \Rightarrow C = r\pi$

$LA = 31.42 \times 10$

$= 314.2 \text{ ft}^2$

# Assignment

**Problem Set 88** due Thursday;  
**Test #21** on Tuesday for 3rd hour,  
on Wednesday for 2nd hour

**\*A/B Optional: #1-5, 8, 12-15, 19-23**