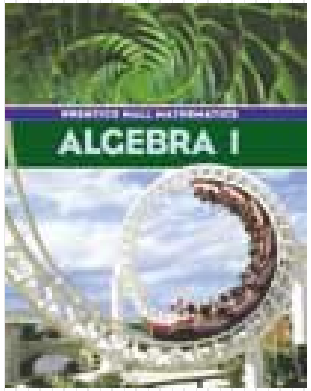
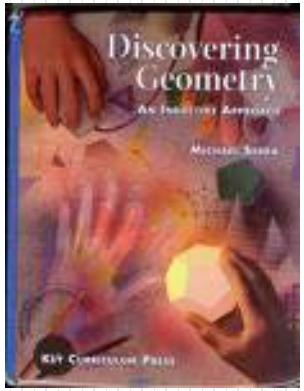
Mr. Northcutt's Math Classes
Class Presentation

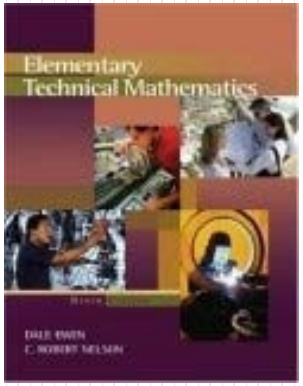
February 6, 2009 (98)



Math 1



Math 2



Applied Math

Math 1 – Daily Summary

- **Announcements**
  - Chapter 5 Test on Thursday, February 12th.
  - Early Release on Wednesday, February 11th.
- **Class Objectives – *What you should learn today*!**
  - Understand "Direct Variation" (in Functions & Graphs)
- **Assignment**
  - **Section 5-5**: 2-20 EVEN, 22, 23

Review

- **Solve for the indicated variable…**

$$nq = m \;; q \qquad\qquad ax + by = 0 \;; y$$

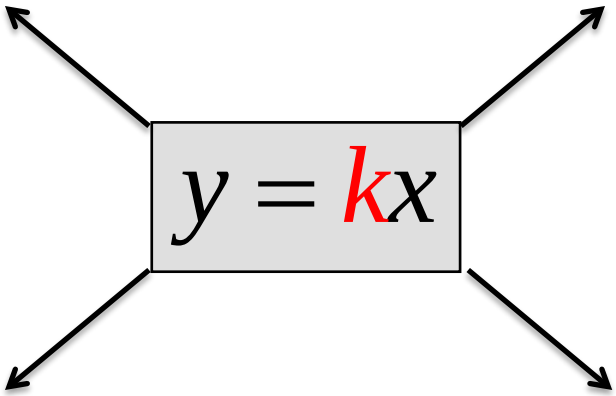
- **Solve each proportion…**

$$\frac{5}{8} = \frac{x}{12} \qquad\qquad \frac{8}{d} = \frac{20}{36}$$

Rate of Change (Constant of Variation)

- **Graph the following functions…on whiteboard.**

$$y(x) = 1 \cdot x \qquad f(t) = 2 \cdot t$$



$$H(c) = \frac{2}{7} \cdot c \qquad p(z) = \frac{-1}{3} \cdot z$$

Is an Equation a Direct Variation…

- **If Direct Variation, its graph is a line with slope *k*…can it be written as y = *k*x?**

$$5x + 2y = 0$$

$$5x + 2y = 9$$

Write an Equation Given a Point (x,y)

- **If you know the equation is a Direct Variation and you are given a point (x, y), you can find the Constant of Variation (*k*) and then write the equation.**

$$(4, -3)$$

Since the point (4,-3) must **lie on the graph** of the equation - it is a **solution to the equation**.

$$y = k \cdot x$$

$$-3 = k \cdot (4)$$

$$\frac{-3}{4} = k$$

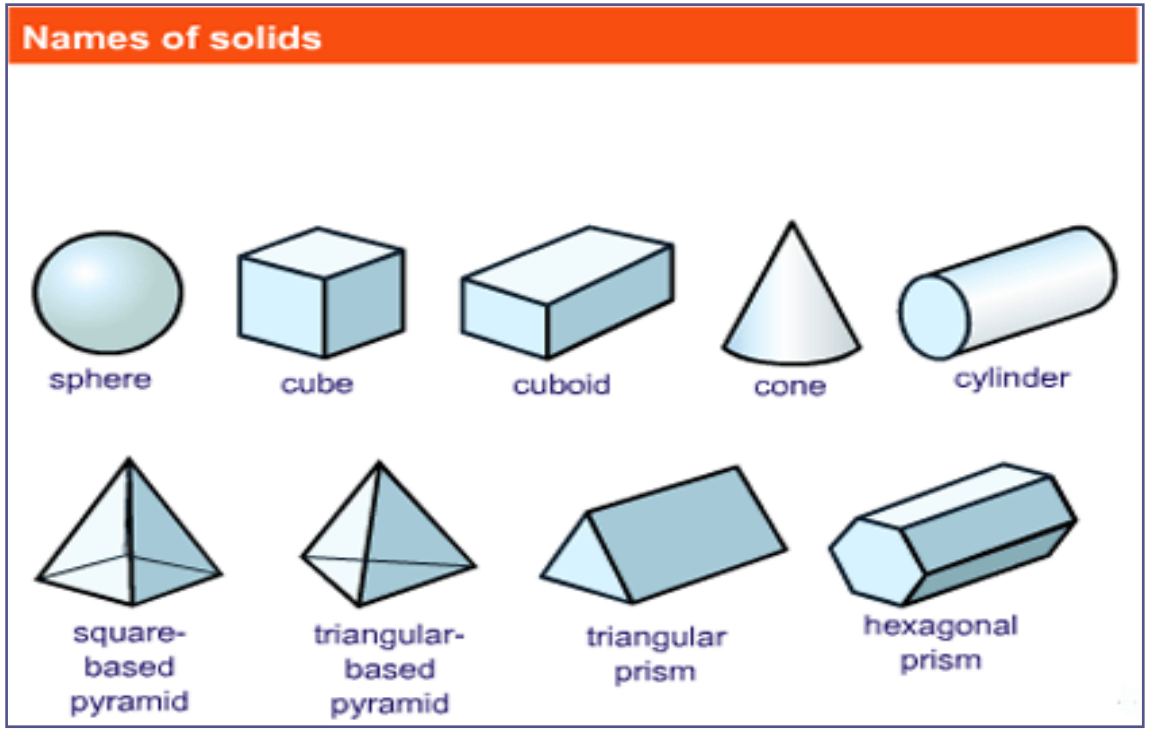
$$y = \frac{-3}{4} \cdot x = -\frac{3}{4}x$$

Math 2 – Daily Summary

- **Announcements**
  - Chapter 5 Test on Thursday, February 12th.
  - Early Release on Wednesday, February 11th.
- **Class Objectives – *What you should learn today!***
  - Calculating Surface Area of Solids
- **Assignment**
  - **Lesson 9.7**: 1-11, 14, 16

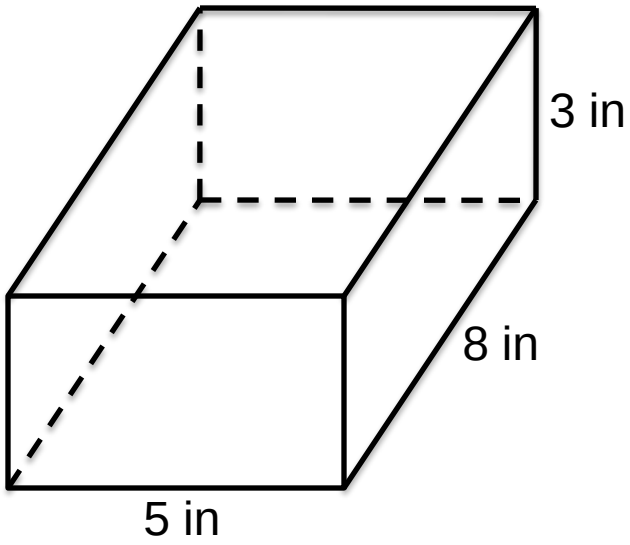
Surface Area

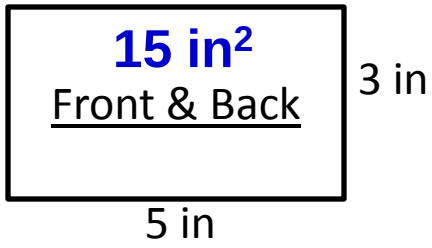
- **Surface Area**
  - The sum of the areas of all the faces (or surfaces) that enclose a solid - including the solid's top and bottom (**bases**) and the remaining surfaces (**lateral faces** or surfaces).



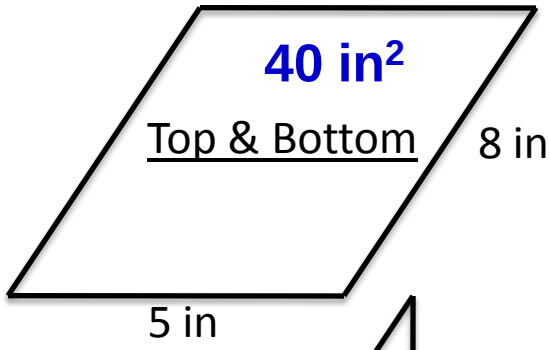
Example - Rectangular Prism

- **Calculate the Surface Area**

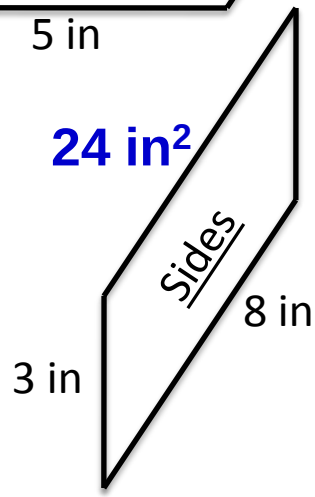




15 x 2 = 30 in²



40 x 2 = 80 in²

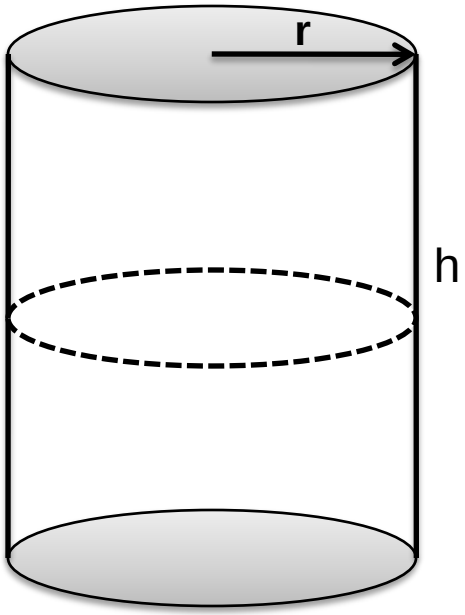


24 x 2 = 48 in²

148 in²

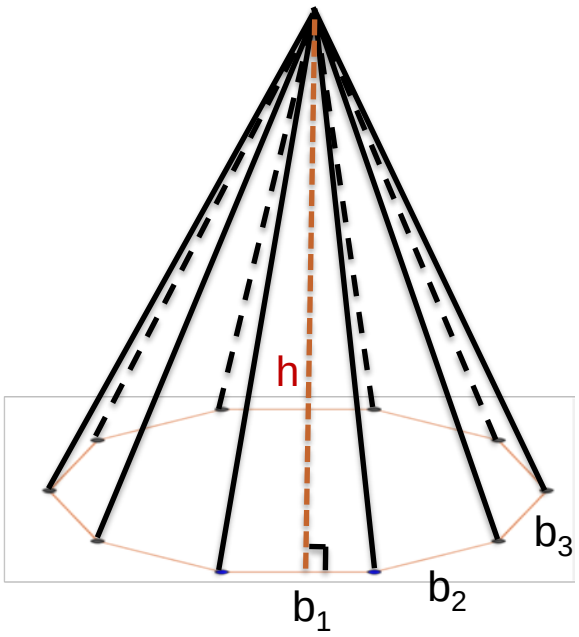
Cylinder - Surface Area

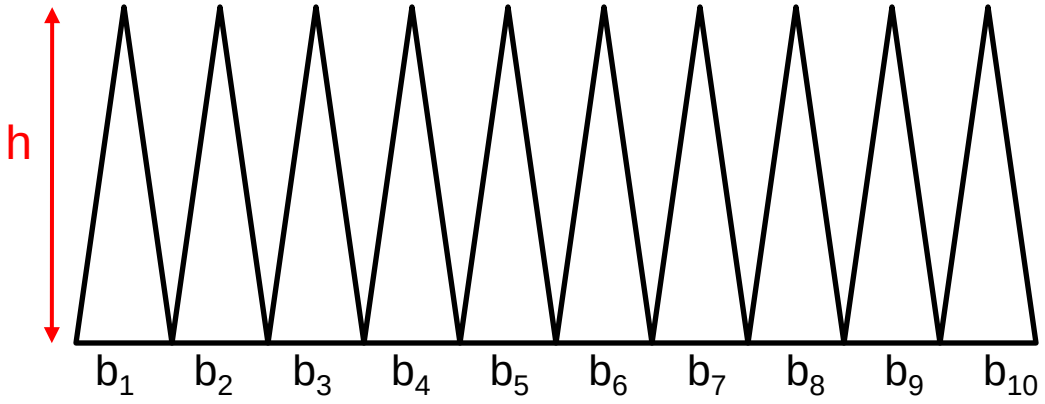
- **Let's take one apart and see what we get…**



Pyramid - Lateral Surface Area

- **Let's think about this one…**





Lateral Surface Area

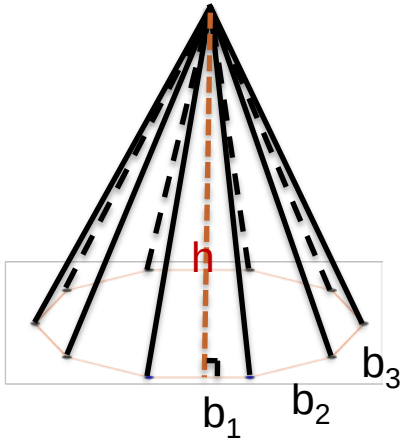
$$= \frac{1}{2}b_1h + \frac{1}{2}b_2h + \frac{1}{2}b_3h + \ldots + \frac{1}{2}b_{10}h$$

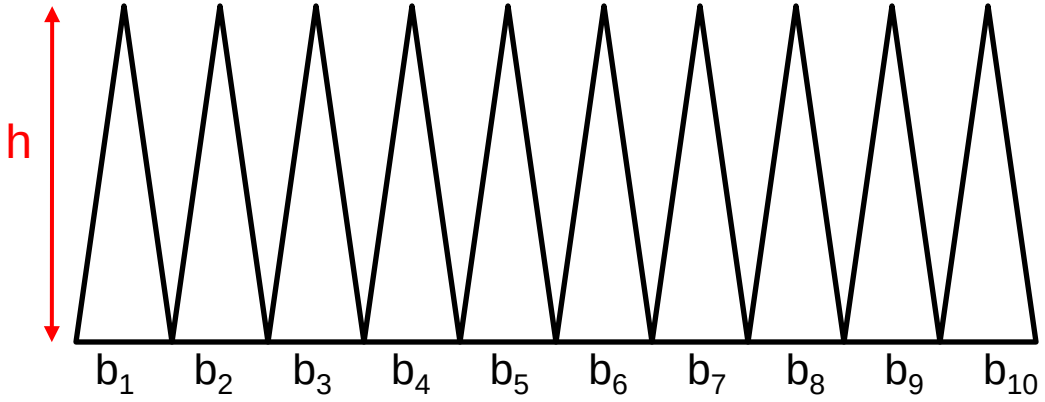
$$= \frac{1}{2}h(b_1 + b_2 + b_3 + \ldots + b_{10})$$

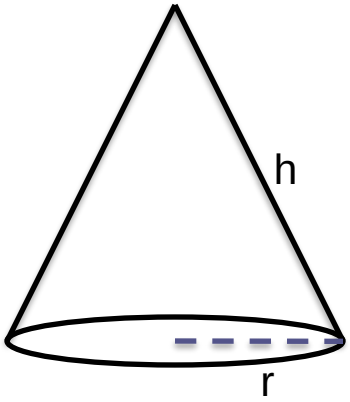
$$= \frac{1}{2}h \cdot p \ (where\ p\ is\ the\ Perimeter)$$

Cone - Surface Area

- **Consider a Pyramid with an infinite # of sides…**







Lateral Surface Area $= \frac{1}{2} h \cdot p$ *(where p is the Perimeter)*

Base Surface Area

Applied Math – Daily Summary

- **Announcements**
  - Chapter 4 Test on Thursday, February 12th.
  - Early Release on Wednesday, February 11th.
- **Class Objectives – *What you should learn today!***
  - QUIZ: Sections 4.1 thru 4.6 (Measurement)
- **Assignment**
  - No HW
  - Geometric Art (**TODAY IS LAST DAY!**)