

Before we begin, are there any questions from last day's work?

Today's Learning Goal(s):

By the end of the class, I will be:

- a) ready for the unit summative.
- b) able to solve problems with circles.

6.11.1 Review

Date: _____

1. Try these conversions, using your metric conversion card and a calculator.
Round final answers to the nearest hundredth, if necessary.

a) 16 in = _____ cm

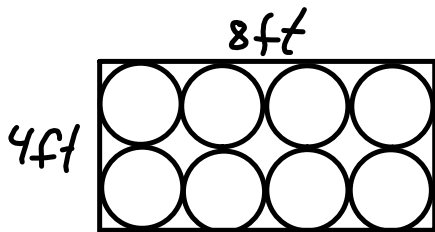
b) 200 kg = _____ lbs

c) 500 ml = _____ fl.oz

d) 0.005 ft = _____ cm

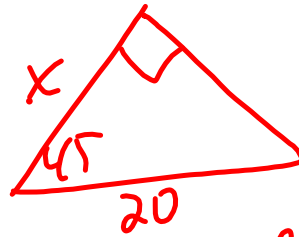
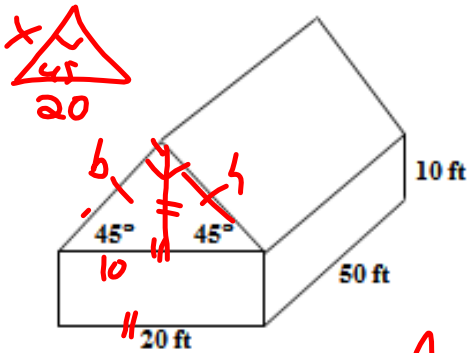
2. Your company supplies circular cover plates for pipes.

How many plates with a 1-ft radius can be made from a 4-ft by 8-ft sheet of stainless steel?
What percentage of the steel will be available for recycling? (to 2 decimals)



$$\% \text{ waste} = \frac{32 - 8\pi}{32} \times 100\%$$

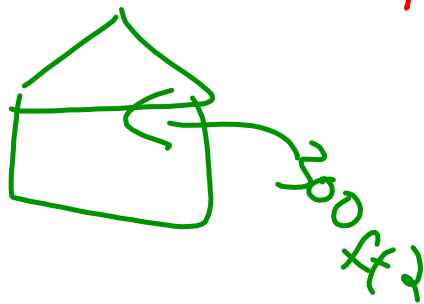
3. For the small factory shown in the following diagram, design specifications require that the air be exchanged every 30 min. } $V_{ex} = 30 \times 400 = 12,000 \text{ ft}^3$
 Would a ventilation system that exchanges air at a rate of 400 ft³ /min satisfy the specifications? Explain.



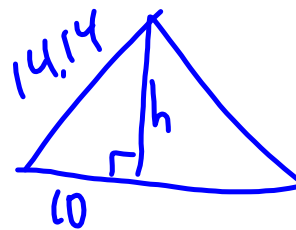
$$\cos 45^\circ = \frac{x}{20}$$

$$x = 20 \cos 45^\circ = 20 \left(\frac{\sqrt{2}}{2}\right)$$

$$= 10\sqrt{2} \Rightarrow \sqrt{200} \approx 14.142$$



$$A = \frac{bh}{2} = \frac{(14.141)^2}{2} = \frac{200}{2} = 100$$



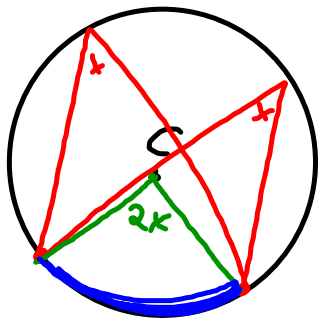
$$h^2 = 14.14^2 - 10^2 = 200 - 100 = 100$$

$$A = \frac{bh}{2} = \frac{20(\sqrt{100})}{2} = \frac{20(10)}{2} = 100 \text{ ft}^2$$

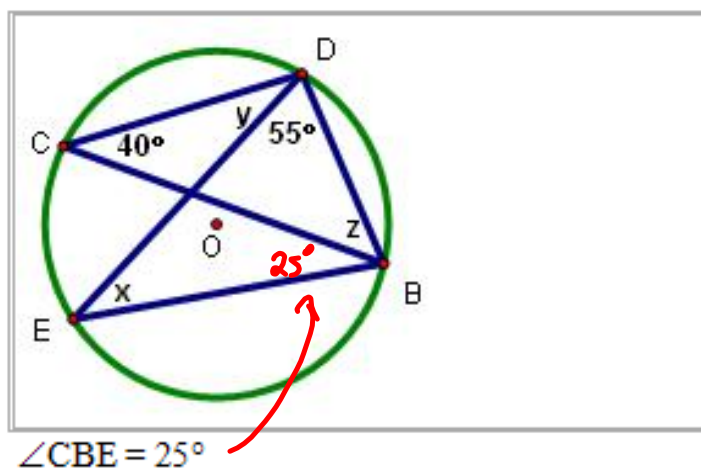
$$h = \sqrt{100} = 10$$

$$V = A_{\text{base}} \times h = 300 \times 50 = 15,000 \text{ ft}^3$$

The main 2 properties



4. Determine the values of x , y , and z in each of the following diagrams. The centre of the circle is O .



$$x = \underline{40^\circ}$$

$$y = \underline{\hspace{2cm}}$$

$$z = \underline{\hspace{2cm}}$$