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.

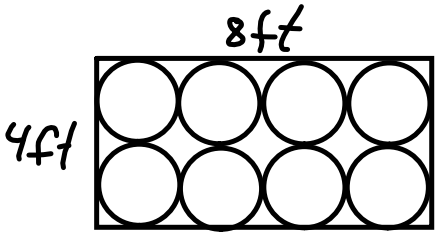
   a) 16 in = _____ cm

   b) 200 kg = _____ lbs

   c) 500 ml = _____ fl.oz

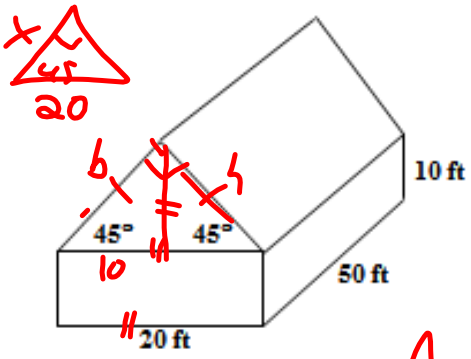
   d) 0.005 ft = _____ cm

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. Would a ventilation system that exchanges air at a rate of 400 ft³ /min satisfy the specifications? Explain.



$V_{ex} = 30 \times 400 = 12\,000\ ft^3$

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

$x = 20\cos 45^\circ$

$= 20\left(\frac{\sqrt{2}}{2}\right)$

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

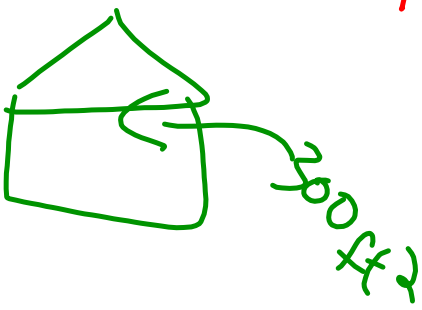
$\div 14.142$

$A = \frac{bh}{2}$

$= \frac{(14.141)^2}{2}$

$= \frac{200}{2}$

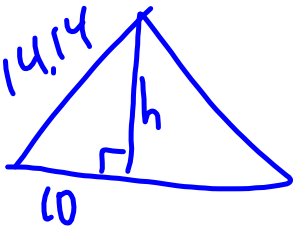
$= 100$



$V = A_{base} \times h$

$= 300 \times 50$

$= 15000\ ft^3$



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

$= 200 - 100$

$= 100$

$h = \sqrt{100}$

$= 10$

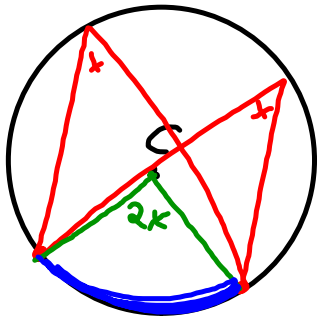
$A = \frac{bh}{2}$

$= \frac{20(\sqrt{100})}{2}$

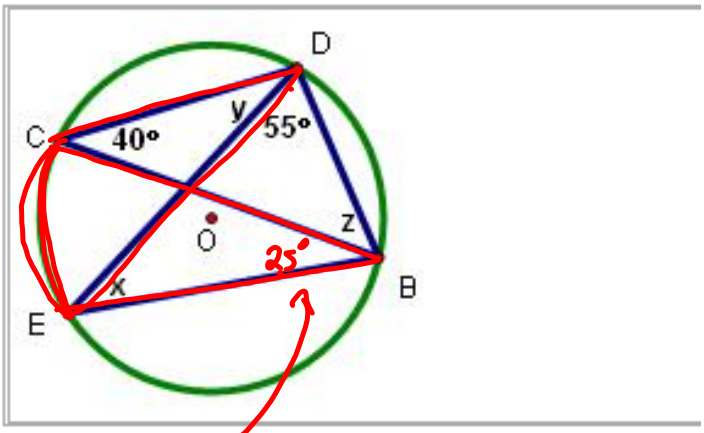
$= \frac{20(10)}{2}$

$= 100\ ft^2$

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.



$\angle CBE = 25°$

x = 40°

y = 25°

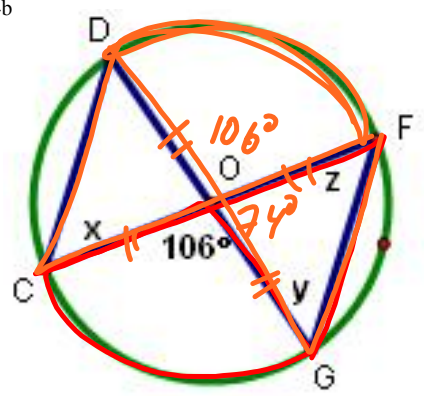
z = 60°

$x + 55 + 25 + z = 180°$

$40 + 55 + 25 + z = 180$

$\therefore z = 60°$

4b



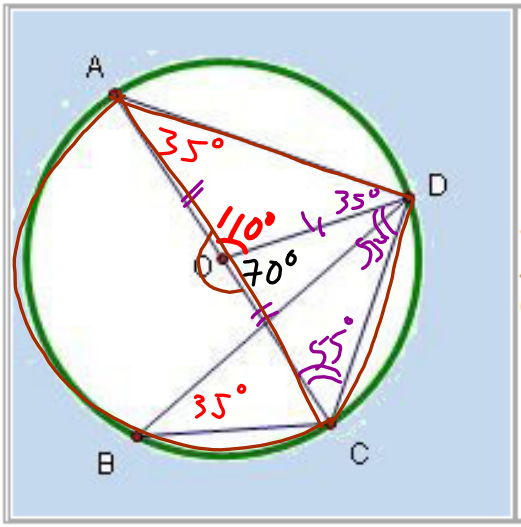
x = 53°

y = 53°

y = 180 − 74° − 53°
= 53°

z = 53°

5. Determine the angle measurements for: ∠ADC, ∠AOD, and ∠DBC.

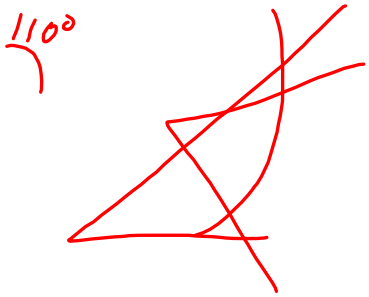


∠DOC = 70°
AC is a diameter
Centre is O

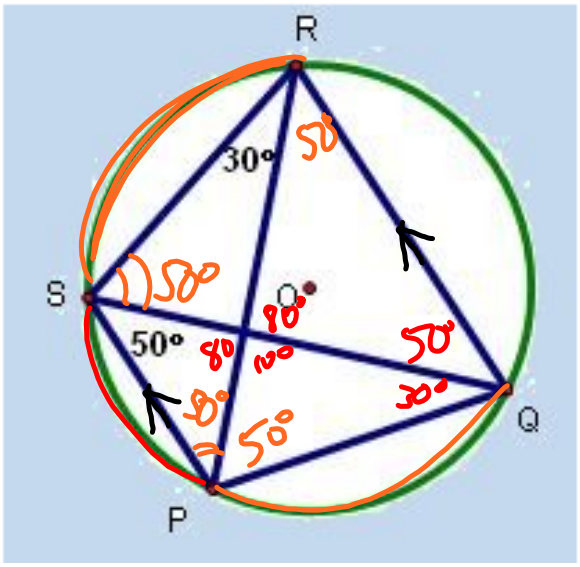
∠ADC= 90°

∠AOD= 110°

∠DBC= 35°



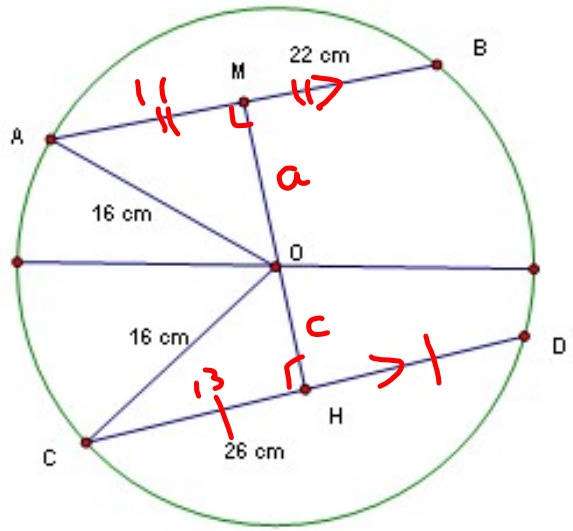
6. Trapezoid PQRS is inscribed in a circle and PS is parallel to QR. Determine the measures for angles PSR and SPQ.



∠PSR= 100°

∠SPQ= 100°

7. A circle's diameter is 32 cm long and a chord (AB), of the same circle, is 22 cm long. Another chord (CD), of the same circle is 26 cm long. Chord AB is parallel to chord CD.
What is the distance between the two chords? (to 2 decimals)



$d = a + c$

$a^2 = 16^2 - 11^2$

$a \doteq 11.619$

$\doteq 11.62$ cm

$c^2 = 16^2 - 13^2$

$=$