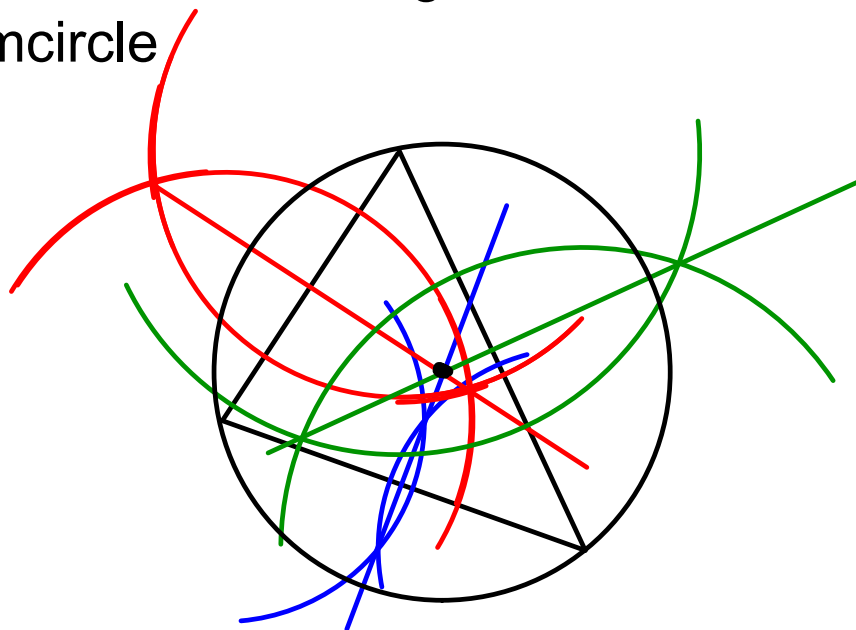
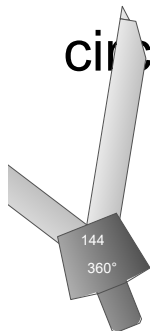


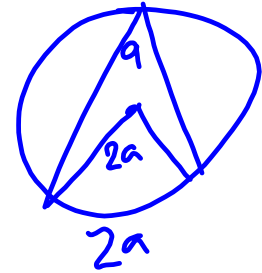
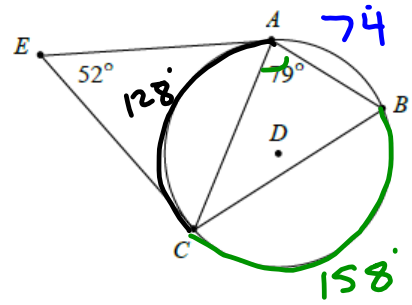
Bellwork: Draw a triangle and construct its circumcircle



Test Next Time!
Make your 3x5
Notecards!!!

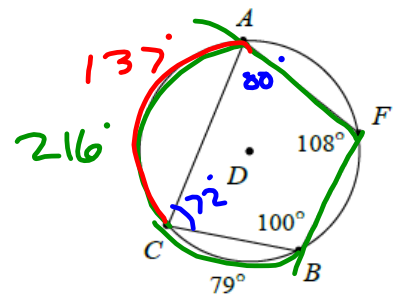
In the figure at the right, A and C are points of tangency.

1. Find $m\widehat{AC}$. $128^\circ = 180 - 52$
2. Find $m\widehat{BC}$. $158^\circ = 2 \cdot 79$
3. Find $m\angle ACB$. $37^\circ = 74/2$



In the figure at the right, $ACBF$ is a cyclic quadrilateral.

4. Find $m\angle C$. $180 - 108 = 72$
5. Find $m\widehat{AC}$. $216 - 79 = 137$

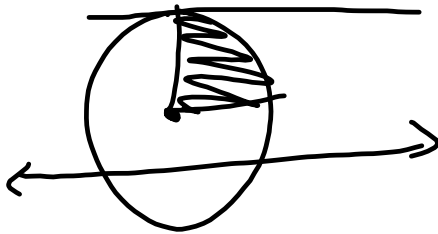
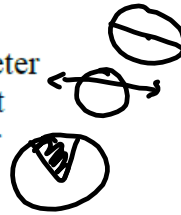


6. Know the following vocabulary word definitions:

Radius
Tangent
Arc

Diameter
Secant
Sector

Chord
Center
Circumference



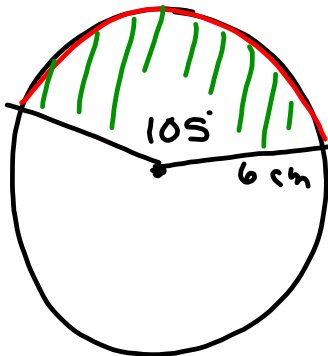
7. Find the arclength of an arc on a circle with radius measuring 6 cm and central angle measuring 105° .

$$L = \frac{\pi r \theta}{180} = \frac{\pi(6)(105)}{180} = 11 \text{ cm}$$

8. Find the area of the sector in a circle with radius measuring 6 cm and central angle measuring 105° .

$$A = \frac{\pi r^2 \theta}{360} = \frac{\pi(6)(105)}{360} = 32.98$$

33 cm^2



$$(x-h)^2 + (y-k)^2 = r^2 \quad (h, k) \text{ center } r \text{ radius}$$

9. Write the equation of a circle centered at $(-2, 7)$ with a radius of 5.

h, k

$$5^2 = 25$$

$$(x+2)^2 + (y-7)^2 = 25$$

10. Identify the center of the circle given by the equation: $(x-1)^2 + (y-10)^2 = 64$

$$(1, 10)$$

$$r = \sqrt{64} = 8$$

11. Identify the location of the center and the length of the radius of the circle given by:

$$x^2 + y^2 - 2x + 18y + 66 = 0 - 66$$

$$\underbrace{x^2 - 2x + 1}_{(x-1)^2} + \underbrace{y^2 + 18y + 81}_{(y+9)^2} = -66 + 1 + 81$$

$$\underbrace{(x-1)^2}_{(x-1)^2} + \underbrace{(y+9)^2}_{(y+9)^2} = 16 \quad \sqrt{r^2} = \sqrt{16}$$

$$\text{Center: } (1, -9) \quad r: 4$$

12. Find the volume of a cone with radius measuring 3 cm and height measuring 15 cm.

$$V = \frac{1}{3} \pi r^2 h = \frac{1}{3} \pi (3)^2 (15)$$

$$= 141.4 \text{ cm}^3$$

13. Find the measure of the radius of a sphere with a volume of 450 cm^3 .

$$V = \frac{4}{3} \pi r^3$$

$$\sqrt[3]{107.42} = \sqrt[3]{r^3}$$

$$r = 4.75 \text{ cm}$$

$$\frac{3 \cdot 450}{4} = \frac{4}{3} \pi r^3$$

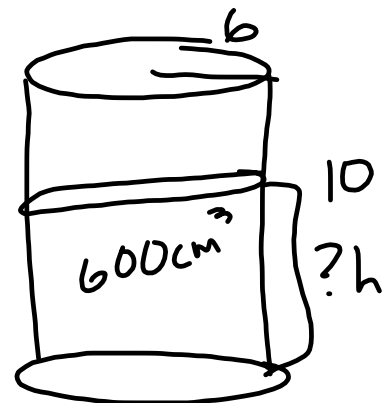
$$\frac{337.5}{\pi} = r^3$$

14. A cylindrical cup has a radius of 6 cm and a height of 10 cm. If 600 cm^3 of water is poured into the empty cup, how deep will the water be in the cup?

$$V = \pi r^2 h$$

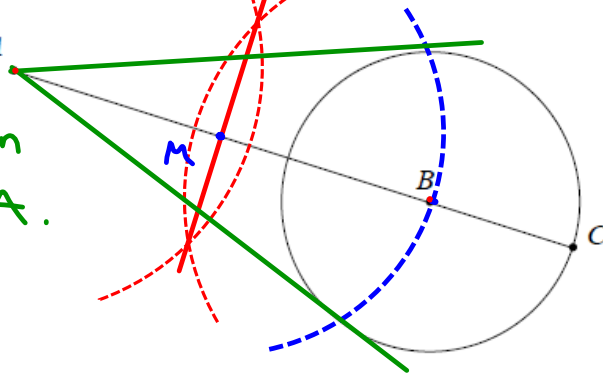
$$\frac{600}{(6^2 \pi)} = \frac{\pi (6^2) h}{(6^2 \pi)}$$

$$h = 5.3 \text{ cm}$$



15. Construct a line from point A tangent to circle B .

1. Construct perpendicular bisector of \overline{AB}
2. Center arc at intersection (M) & intersects center (B)
3. Draw tangents A to intersections on circle from point A .



16. Construct the circumcircle of $\triangle ABC$.

1. Construct perpendicular bisectors for each side
2. Center circle at intersection of bisectors & extend to corner of triangle

