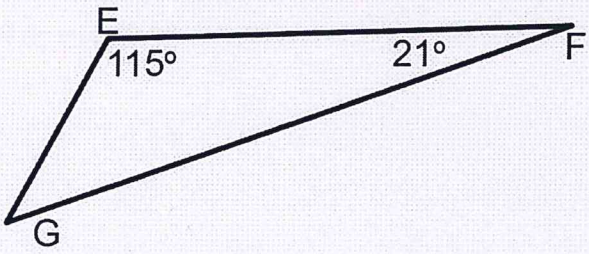
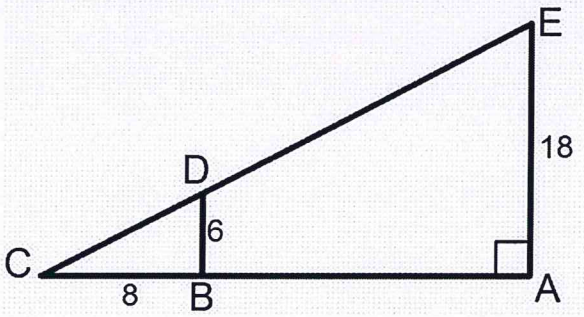
Bellwork Alg 2 Tuesday, March 12, 2019

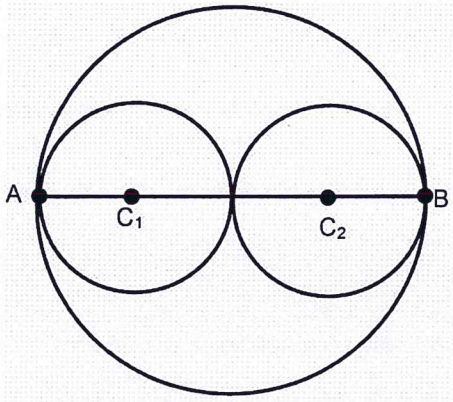
1. List the sides of $\triangle EFG$ in order from shortest to longest.



2. In the figure below, $\overline{BD}$ is parallel to a $\overline{AE}$. What is the length of $\overline{CE}$?



3. In the figure below, AB is a diameter of the large circle. The centers C_1 and C_2 of the smaller circles are on AB. The two small circles are congruent and tangent to each other and to the larger circle. The circumference of circle C_1 is 8π. What is the area of the large circle?



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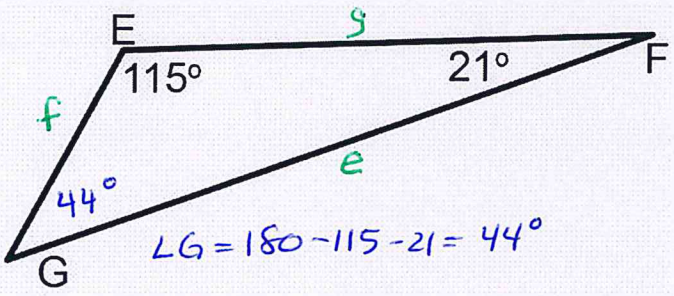
ANSWERS

1. List the sides of $\triangle EFG$ in order from shortest to longest.



$\angle G = 180 - 115 - 21 = 44°$

Angles: smallest to largest

$\angle F$

$\angle G$

$\angle E$

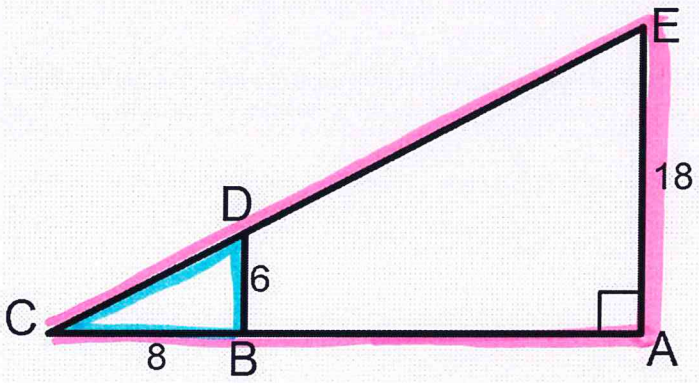
sides: shortest to longest

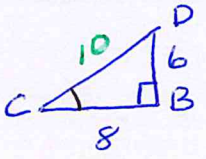
$f \rightarrow \overline{EG}$

$g \rightarrow \overline{EF}$

$e \rightarrow \overline{FG}$

2. In the figure below, $\overline{BD}$ is parallel to a $\overline{AE}$. What is the length of $\overline{CE}$?





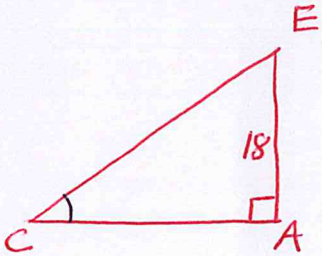
Use pythagorean Theorem to find $\overline{CD}$:

$8^2 + 6^2 = (CD)^2$

$64 + 36 = (CD)^2$

$100 = (CD)^2$

$CD = 10$

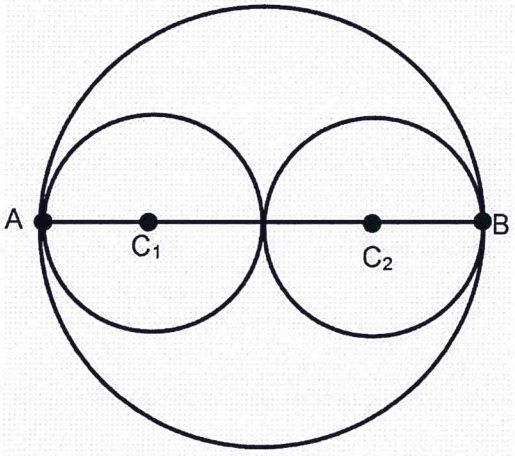


These two Δs are similar: Corresponding sides are proportional

$\frac{6}{18} = \frac{10}{CE}$

$CE = 30$

3. In the figure below, AB is a diameter of the large circle. The centers C_1 and C_2 of the smaller circles are on AB. The two small circles are congruent and tangent to each other and to the larger circle. The circumference of circle C_1 is 8π. What is the area of the large circle?



* Circumference $= \pi d$

$8\pi = \pi d$

diameter of $C_1 = 8$

* diameter of C_1 = radius of larger circle

* Area of large circle $= \pi r^2$

$= \pi (8)^2$

$= 64\pi$