

Math II: 2nd Semester Final Pre-Test

Unit 3: Comparing Functions – Modeling and Transformations

Find the equation of the line that goes through the given points.

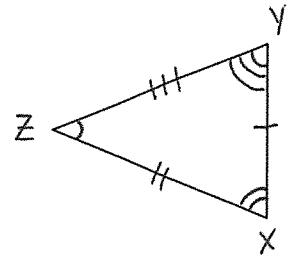
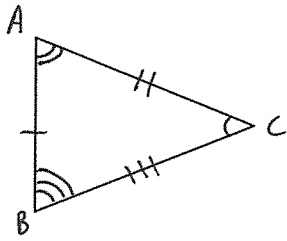
1. A linear equation through the points $(-6, 38)$ and $(3, -16)$.

2. A quadratic equation through the points $(-4, -66)$, $(0, -10)$, and $(3, -31)$.

3. An exponential equation through the points $(2, 63)$ and $(8, 45927)$.

Unit 4: Similarities

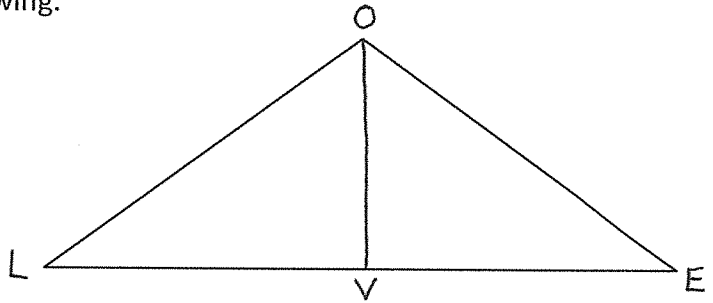
4. Given the following triangles, provide CONGRUENCE statements for the angles and sides that will show that $\triangle ABC \cong \triangle XYZ$:



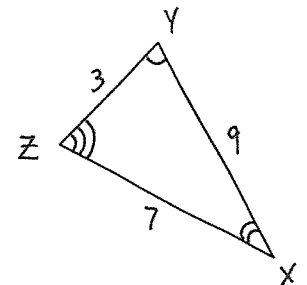
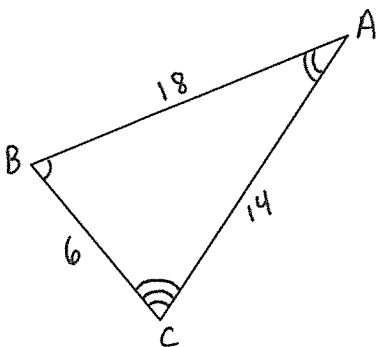
5. Write a two column proof for the following:

- Given:** $OV \perp LE$
 OV bisects LE
 $\triangle LOE$ is an isosceles

Prove: $\triangle LOV \cong \triangle EOv$



6. Given the following triangles, provide SIMILARITY statements for the angles and sides that will show that $\triangle ABC \sim \triangle XYZ$:



7. Write a two column proof for the following:

Given: $QR \parallel TU$

$$QR = 5$$

$$QS = 3$$

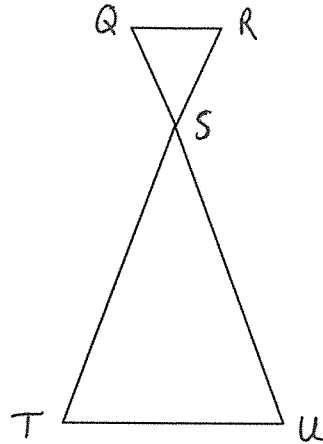
$$RS = 3$$

$$ST = 9$$

$$SU = 9$$

$$TU = 15$$

Prove: $\Delta SQR \sim \Delta SUT$



Unit 5: Right Triangles and Trigonometry

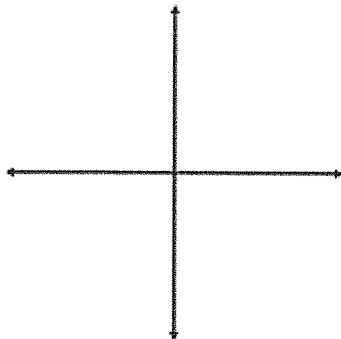
Given the following angle:

A. Draw the angle in standard form.

B. Find one (1) positive and one (1) negative coterminal angle of the given angle.

C. Find the reference angle of the given angle.

8A. -375°



8B.

8C.

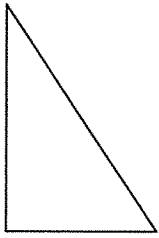
Evaluate each of the following using the Hand Trick:

9. $\sin(-225^\circ)$

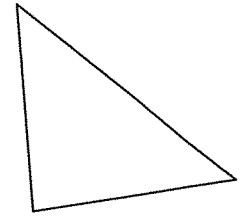
10. $\cos(390^\circ)$

Solve each of the following triangles:

11. Given the RIGHT triangle with right $\angle C$
 $\angle B = 30^\circ$ & $a = 9$

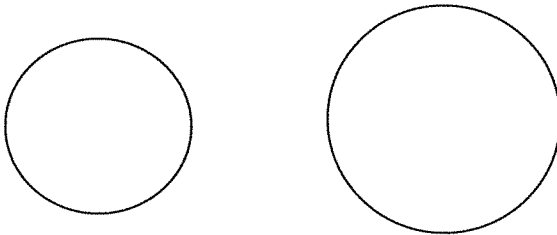


12. Given the Non-Right Triangle:
 $\angle A = 103^\circ$, $a = 26$, & $c = 6$

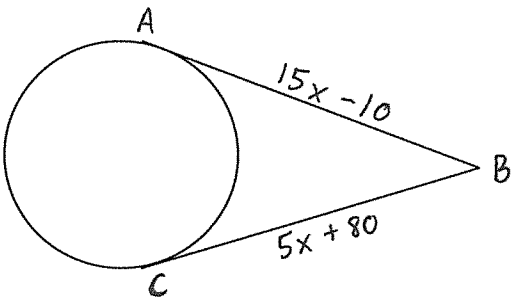


Unit 7: Circles:

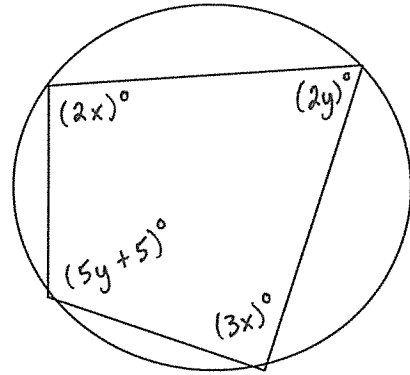
13. State the number of common tangents between the given circles, and then draw them.



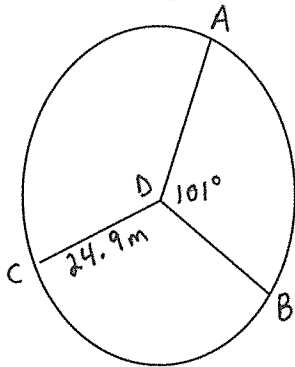
14. Find the value of \overline{AB} .



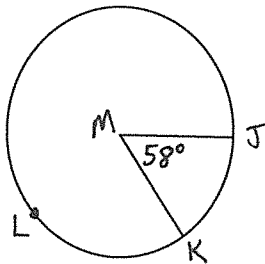
15. Find the value of all variables:



16. In the following $\angle ADC \cong \angle BDC$. Find the length of \widehat{AB} .

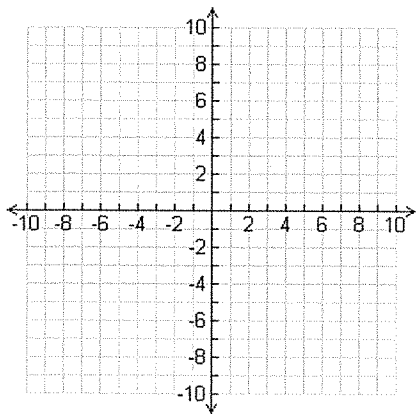


17. Find the area of circle M, given the area of the sector is 36.07 cm^2



Graph each of the following equations:

18. $x^2 + y^2 = 64$



19. $x^2 + y^2 - 10x + 8y - 23 = 0$

