

Assignment #6-3

Secondary 3 Honors

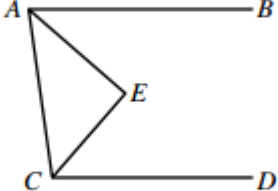
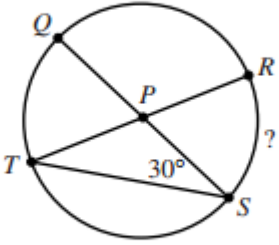
Precalculus Book: Pg. 211 9, 14, 17, 20, 22, 23, 37, 42, 45, 46, 49, 50, 54, 56, 59, 63, 66, 68, 70, 71, 81, 82, 93, 96, 116, 118, 120

Additional Problems:

- If $f(x) = 3^{x-4}$
 - Graph $f(x)$
 - $f(-4.21)$
 - $f'(-4.21)$
 - Write the equation of the line tangent to the graph at $x = -4.21$
- If $\frac{dy}{dx} = x^2 - 4$ find the x value(s) where y would have a horizontal tangent line.

Hint: Use your calculator and look at unit 5 day 4 notes if you don't remember this notation.

ACT Review:

<p>1. The equations below are linear equations of a system where a, b, and c are positive integers.</p> $ay + bx = c$ $ay - bx = c$ <p>Which of the following describes the graph of at least 1 such system of equations in the standard (x,y) coordinate plane?</p> <ol style="list-style-type: none"> 2 parallel lines 2 intersecting lines A single line <p>A. I only B. II only C. III only D. I or II only E. I, II, or III</p>	<p>2. In the figure below, $\overline{AB} \parallel \overline{CD}$, \overline{AE} bisects $\angle BAC$, and \overline{CE} bisects $\angle ACD$. If the measure of $\angle BAC$ is 82°, what is the measure of $\angle AEC$?</p>  <p>A. 86° B. 88° C. 90° D. 92° E. Cannot be determined from the given information</p>
<p>3. In the circle shown below, chords \overline{TR} and \overline{QS} intersect at P, which is the center of the circle, and the measure of $\angle PST$ is 30°. What is the degree measure of minor arc \widehat{RS}?</p>  <p>F. 30° G. 45° H. 60° J. 90° K. Cannot be determined from the given information</p>	<p>4. For what value of a would the following system of equations have an infinite number of solutions?</p> $2x - y = 8$ $6x - 3y = 4a$ <p>A. 2 B. 6 C. 8 D. 24 E. 32</p> <p>5. If x and y are real numbers such that $x > 1$ and $y < -1$, then which of the following inequalities <i>must</i> be true?</p> <p>A. $\frac{x}{y} > 1$ B. $x ^2 > y$ C. $\frac{x}{3} - 5 > \frac{y}{3} - 5$ D. $x^2 + 1 > y^2 + 1$ E. $x^{-2} > y^{-2}$</p>