

## Assignment #9-3

## Secondary 3 Honors

Precalculus Book: pg. 376 18-21, 26, 31, 33, 34, 39, 42, 46, 48

### Additional Problems:

1. Graph the following functions using your graphing calculator on the interval  $[0, 2\pi)$  and find the points of intersection to 4 decimal places.  $y = \sin^2 x$ ,  $y = e^x - 4x$
2. Solve for  $x$ :  $x^2 + 5x \leq 14$
3. Divide  $(6x^3 + 7x^2 - 15x - 16)$  by  $(2x - 1)$
4. Use your calculator to find the increasing and decreasing intervals for  $f(x) = 2x^3 - 5x - 3$ .
5. If  $f(x) = x^2$ , find  $\frac{f(x-5) - f(x)}{x}$  where  $x \neq 0$ .
6. Sally and Jon are at the base of a 75 meter cliff. Godzilla, who is 62 meters tall, is at the top of the cliff waiting to use the lasers that he shoots out of his eyes to zap them. They start running away. What angle of depression will Godzilla need if he needs to zap Sally and Jon when they are 25 meters away from the base of the cliff? You may need to know that Godzilla's eyes are 3 meters from the top of his head.