## EXAM 1 - MATH 151 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 10 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

- 1. Consider the function  $f(x) = \sqrt{x^2 7x 60}$ .
  - (a) Write the condition that should be imposed to discover the domain of f.
  - (b) Solve for x to find the domain of f and leave your answer in interval notation.

2. Compute the value of the expression

 $\sec{(\tan^{-1}{(-5)})}.$ 

3. Consider the function f whose graph y = f(x) is depicted below. Fill in the table below:



	c = 1	c = 2	c = 3
$\lim_{x \to c^{-}} f(x)$			
$\lim_{x \to c^+} f(x)$			
$\lim_{x \to c} f(x)$			
f(c)			
Continuity or			
Type of Discontinuity			

4. The following limit is of the indeterminate type  $(\frac{0}{0})$ . Perform the work required to compute it: x + 5

$$\lim_{x \to -5} \frac{x+5}{\sqrt{2x+14}-2}.$$

5. The following limit is of the indeterminate type  $(\infty - \infty)$ . Perform the work required to compute it:

$$\lim_{x \to 7} \left( \frac{3}{x-7} - \frac{27}{x^2 - 5x - 14} \right).$$