1.4 Finding Limits from Tables

Calculus   Name: _____

Use the table for each problem to evaluate the limit.

1. $\lim\limits_{x \to 3} f(x) =$

x	2.95	2.999	3.001	3.05
$f(x)$	-5.3	-5.01	-4.99	-4.87

2. $\lim\limits_{x \to -5} f(x) =$

x	-5.5	-5.001	-4.999	-4.5
$f(x)$	-11.1	-11.001	-10.99	-10.2

For each function, create your own table of values to evaluate the limit.

3. $f(x) = \dfrac{x^2 - 7x + 12}{x - 3}$

x					
$f(x)$					

$$\lim\limits_{x \to 3} f(x) =$$

4. $f(x) = \dfrac{2x^3 + 13x^2 + 13x - 10}{x + 2}$

x					
$f(x)$					

$$\lim\limits_{x \to -2} f(x) =$$

Use the information given for each problem to evaluate the limit.

5. The function f is continuous and decreasing $x \geq -10$. The table gives values of f at selected values of x.

x	-5.09	-5.001	-4.999	-4.8
$f(x)$	5.76	5.501	5.499	5.1

Approximate the value of $\lim\limits_{x \to -5} \cot(f(x))$.

6. The function f is continuous and increasing for $x \geq 0$. The table gives values of f at selected values of x.

x	0.7	0.999	1.001	1.2
$f(x)$	-1.2	-1.001	-0.999	-0.7

Approximate the value of $\lim\limits_{x \to 1} e^{2f(x)}$.