1. If the function $f$ is continuous for all real numbers and if $f(x) = \frac{x^2 - 6x + 9}{x - 3}$ when $x \neq 3$, then $f(3) =$

2. Let $f$ be the function defined by
$$f(x) = \begin{cases} \frac{x^2 - 14x + 40}{x - 10}, & x \neq 10 \\ a, & x = 10 \end{cases}.$$ 
For what value of $a$ is $f$ continuous at $x = 10$?

3. Let $f$ be the function defined by
$$f(x) = \begin{cases} \frac{x^2 + 13x + 36}{b(x+4)}, & x \neq -4 \\ b, & x = -4 \end{cases}.$$ 
For what value of $b$ is $f$ continuous at $x = -4$?

4. If the function $f$ is continuous for all real numbers and if $f(x) = \frac{x^2 + 3x - 4}{x - 1}$ when $x \neq 1$, then $f(1) =$

5. Let $f$ be the function defined by
$$f(x) = \begin{cases} \frac{\sin(4x)}{6x}, & x \neq 0 \\ c, & x = 0 \end{cases}.$$ 
For what value of $c$ is $f$ continuous at $x = 0$?

6. Let $f$ be the function defined by
$$f(x) = \begin{cases} \frac{x^2 - 8x + 12}{x - 2}, & x \neq 2 \\ c, & x = 2 \end{cases}.$$ 
For what value of $c$ is $f$ continuous at $x = 2$?