Determine the limit for each of the following limits.

$$\lim_{x \to 2} \frac{4x - 8}{x^2 - 4} = \frac{(4)(2) - 8}{(2)^2 - 4} = \frac{0}{0}$$

$$\lim_{x \to 2} \frac{4(x-2)}{(x-2)(x+2)} = \lim_{x \to 2} \frac{4}{x+2} = \frac{4}{(2)+2} = 1$$

$$\lim_{x \to 0} \frac{4x^2 - 2x}{x} = \frac{4(0)^2 - 2(0)}{(0)} = \frac{0}{0}$$

$$\lim_{x \to 0} \frac{4x^2 - 2x}{x} = \lim_{x \to 0} \frac{x(4x-2)}{x} = \lim_{x \to 0} 4x - 2 = 4(0) - 2 = -2$$

$$\lim_{x \to 5} \frac{x^2 - 25}{x - 5} = \frac{(5)^2 - 25}{(5) - 5} = \frac{0}{0}$$

$$\lim_{x \to 5} \frac{\cancel{(x-5)}(x+5)}{\cancel{(x-5)}} = \lim_{x \to 5} x + 5 = (5) + 5 = 10$$

$$\lim_{x \to 0} \frac{2x^2 + x}{x} = \frac{2(0)^2 + (0)}{(0)} = \frac{0}{0}$$

$$\lim_{x \to 0} \frac{x(2x+1)}{x} = \lim_{x \to 0} 2x + 1 = 2(0) + 1 = 1$$