1. \( \lim_{x \to 2} \frac{x^2 + 3x - 10}{x^2 - x - 2} \)

2. \( \lim_{x \to \infty} \frac{x - 2x^3}{1 + x^3} \)

3. \( y = \frac{x}{\sqrt{x^2 + 1}}, \quad y\big|_{x=1} = ? \)
4. $y = \sqrt{1 - 8x}, \ y'' = ?$

5. The distance traveled by a car after the brakes are applied is given by $s(t) = 40t - 5t^2$ (in meters). How far does the car travel, after the brakes are applied, until it comes to a stop?