

Must show all steps and all work to earn full credit.

Simplify.

$$1) \frac{9 + \frac{3}{x}}{\frac{x}{4} + \frac{1}{12}}$$

$$2) \frac{\frac{2}{x} + \frac{3}{y}}{\frac{3}{x} - \frac{2}{y}}$$

Simplify the complex fraction.

$$3) \frac{\frac{1}{k+2}}{\frac{5}{k^2-4}}$$

Solve the equation.

$$4) \frac{3}{y+5} - \frac{9}{y-5} = \frac{6}{y^2-25}$$

$$5) \frac{7}{m+1} - \frac{6}{m-1} = \frac{-14}{m^2-1}$$