

$$b) \frac{x-3}{x+2} \div \frac{x^2-9}{x^2+4} = \frac{x-3}{x+2} \cdot \frac{x^2+4}{x^2-9} = \frac{x-3}{x+2} \cdot \frac{x^2+4}{(x-3)(x+3)}$$

$$= \frac{x^2+4}{(x+2)(x+3)}$$

4) Add or subtract as indicated. Write all answers in lowest terms.

$$a) \frac{5}{y+3} - \frac{3}{y} = \frac{5}{y+3} \cdot \frac{y}{y} - \frac{3}{y} \cdot \frac{y+3}{y+3} = \frac{5y-3(y+3)}{y(y+3)}$$

$$= \frac{5y-3y-9}{y(y+3)} = \frac{2y-9}{y(y+3)}$$

$$b) \frac{2}{y^2+3y+2} - \frac{1}{y^2+5y+6} = \frac{2}{(y+2)(y+1)} - \frac{1}{(y+2)(y+3)}$$

$$= \frac{2}{(y+2)(y+1)} \cdot \frac{y+3}{y+3} - \frac{1}{(y+2)(y+3)} \cdot \frac{y+1}{y+1}$$

$$= \frac{2(y+3)-(y+1)}{(y+1)(y+2)(y+3)} = \frac{2y+6-y-1}{(y+1)(y+2)(y+3)} = \frac{y+5}{(y+1)(y+2)(y+3)}$$

$$5) \text{ Evaluate } -8^{2/3} = -(\sqrt[3]{8})^2 = -2^2 = -4$$