

Some of the expressions below are already simplified and some can be simplified. Simplify all those that can be simplified. Circle those that are already simplified. You might need to factor first.

$$1) \quad \frac{2x+1}{2x}$$

$$2) \quad \frac{3x+1}{1+3x}$$

$$3) \quad \frac{x(x-7)}{2x(x-7)(x+8)}$$

$$4) \quad \frac{(x^2-1)}{(x+1)}$$

Perform the operation indicated and fully simplify each expression.

$$5) \quad \frac{5x(x-4)}{20x^2(x+5)(x-4)} \cdot \frac{2(x+5)}{(x+1)}$$

$$6) \quad \frac{xy}{3x^2} \div \frac{y^2}{6x}$$

$$7) \quad \frac{x+8}{x+2} - \frac{x-2}{x+2}$$

$$8) \quad \frac{x^2-25}{x+3} \div \frac{3x+15}{x^2+4x+3}$$

Perform the operation indicated and fully simplify each expression.

9) $\frac{3x}{2x^2} + \frac{5}{x}$

10) $\frac{5}{x-4} + \frac{3}{x^2-3x-4}$

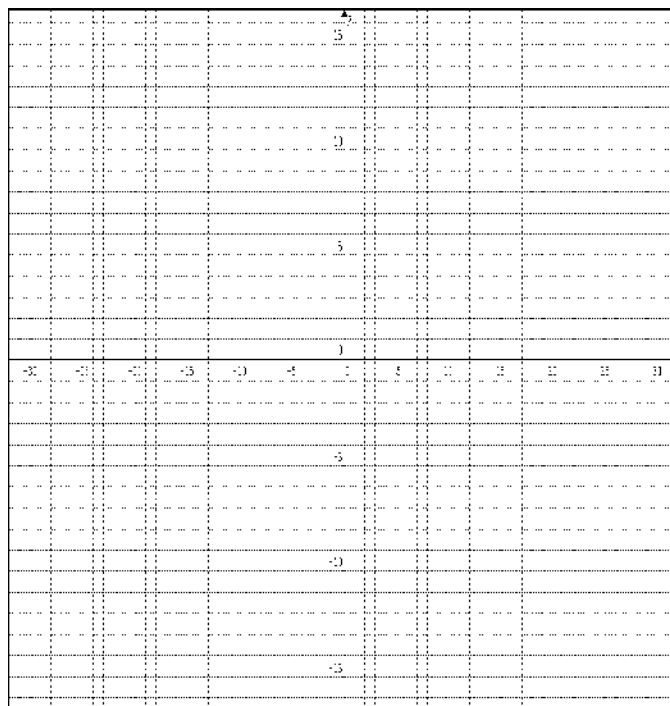
11) Sketch the following lines on the graph below:

a) $y = \frac{2}{3}x - 3$

b) $y = -2x + 1$

c) $x = 5$

d) $y = -4$



12) Solve for x:

a) $3(2x + 1) - 2(8x - 3) = 1 + x$