

Name: _____

1. Simplify each of the following completely.

$$(a) \frac{2x^2 - 7x - 15}{2x^2 + 13x + 15} \cdot \frac{x^2 - x - 30}{x^2 + x - 30}$$

$$(b) \frac{\frac{5}{x-3} + \frac{2x}{x+3}}{\frac{2}{x+3} - \frac{7}{x-3}}$$

2. Solve each of the following equations.

$$(a) 3x^2 - 4x - 1 = 0$$

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

$$(c) S = \frac{a}{1-r}; \text{ for } r$$