

1. Identify the non-permissible values and simplify both the following.

a) $\frac{(2x+3)(x+4)}{(x-4)(2x+3)}$

b) $\frac{x^2 + x - 20}{x^2 - 25}$

2. Simplify the following expressions.

a) $\frac{6x+9}{x^2+3x} \div \frac{12x^2+18x}{12x+4x^2}$

b) $\frac{2x^2+11x+15}{x^2+2x-3} \times \frac{x^2-3x+2}{4x^2+8x-5}$

3. Simplify the following expressions.

a) $\frac{x+5}{4} + \frac{x+2}{6}$

b) $\frac{x+1}{5} - \frac{x+2}{x+3}$

4. Solve.

a) $x - \frac{7}{2} = \frac{2}{x}$

b) $x - \frac{8}{x+5} = 4$