

Name: _____

1. Simplify the following fractions.

(a) $\frac{18x}{16}$ (b) $\frac{8a}{24}$ (c) $\frac{9n^2}{30n}$ (d) $\frac{6x}{36x^2}$

2. Simplify the following algebraic fractions by first factorising the numerator and/or denominator and then cancelling.

(a) $\frac{6n - 9}{12}$ (b) $\frac{8a}{6a^2 - 10a}$ (c) $\frac{4x^2 + 12x}{16x + 48}$

(d) $\frac{2x + 6}{x^2 + 8x + 15}$ (e) $\frac{m^2 - m - 30}{5m - 30}$

(f) $\frac{n^2 - 25}{n^2 + 12n + 35}$ (g) $\frac{x^2 - x - 56}{x^2 + 9x + 14}$

3. Solve the following problems.

(a) $\frac{3x}{5} + \frac{6x}{7}$ (b) $\frac{5n}{4} + \frac{2n}{3}$

4. Solve the following problems.

(a) $\frac{2x + 5}{3} + \frac{3x - 4}{4}$ (b) $\frac{3n + 2}{5} - \frac{2n - 7}{6}$

(c) $\frac{8a^2}{15} \times \frac{3}{4a}$ (d) $\frac{2x}{9} \div \frac{4x^2}{3}$

(e) $\frac{3x + 15}{4x - 16} \times \frac{x^2 - 16}{x^2 + 9x + 20}$

(f) $\frac{3x - 21}{x^2 - 11x + 28} \div \frac{x^2 - x - 56}{x^2 - 12x + 32}$