

4B.4 - All Operations

Simplify each and state the excluded values.

1) $\frac{2b^2 - 11b + 12}{b - 4}$

2) $\frac{5x^2 - 17x - 12}{x - 4}$

3) $\frac{p - 3}{2p^2 - 12p + 18}$

4) $\frac{14n^2 + 12n}{20n}$

Simplify each expression.

5) $\frac{1}{4n^3 + 4n^2} \cdot \frac{n^2 + 7n + 10}{n + 5}$

6) $\frac{p^2 - 14p + 49}{28p} \cdot \frac{1}{p - 7}$

7) $\frac{6n^3 + 42n^2}{n + 7} \cdot \frac{1}{n - 8}$

8) $\frac{2x + 8}{8x} \cdot \frac{1}{x + 4}$

9) $\frac{b - 4}{b^2 + 2b - 24} \div \frac{9b}{5b^3 + 30b^2}$

10) $\frac{k - 9}{k - 5} \div \frac{k - 8}{k^2 - 13k + 40}$

11) $\frac{8m^2 + 48m}{8m} \div \frac{m + 6}{3}$

12) $\frac{6x - 54}{7x^2} \div \frac{3}{7x^2}$

13) $\frac{x + 4}{x^2 + 8x + 16} + \frac{2}{x^2 + 8x + 16}$

14) $\frac{2}{2x} + \frac{5}{2x - 4}$

$$15) \frac{3}{5} + \frac{4}{v-6}$$

$$16) \frac{6}{a-4} + \frac{3}{6}$$

$$17) \frac{n+2}{n^2-3n-10} - \frac{3}{n^2-3n-10}$$

$$18) \frac{3}{2} - \frac{4}{3x+18}$$

$$19) \frac{6}{3} - \frac{5x}{2x-6}$$

$$20) \frac{6}{3n} - \frac{n-2}{n-4}$$

$$21) \frac{\frac{x}{16}}{\frac{x-3}{16}}$$

$$22) \frac{\frac{3}{x^2}}{\frac{x^2}{25}}$$

$$23) \frac{9}{\frac{5}{9} - \frac{x}{25}}$$

$$24) \frac{\frac{1}{4} + \frac{4}{m}}{\frac{16}{m^2}}$$

$$25) \frac{6}{3} - \frac{4}{6x+6}$$

$$26) \frac{x^2-2x-3}{2} \cdot \frac{1}{x-3}$$

$$27) \frac{4n^3-20n^2}{n-5} \div \frac{1}{9n^2}$$

$$28) \frac{6}{2n-6} + \frac{3}{2}$$