

Rational Expressions

1. Find an equivalent rational expression in lowest terms, and identify the value(s) of the variable that must be excluded to prevent division by zero.

a) $\frac{16n}{20n}$

b) $\frac{x^3y}{y^4x}$

c) $\frac{2n - 8n^2}{4n}$

d) $\frac{db + dc}{db}$

e) $\frac{x^2 - 9b^2}{x^2 - 2xb - 3b^2}$

f) $\frac{3n^2 - 5n - 2}{2n - 4}$

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Rational Expressions

1. Find an equivalent rational expression in lowest terms, and identify the value(s) of the variable that must be excluded to prevent division by zero.

a) $\frac{16n}{20n}$

$$\frac{4}{5} \quad n \neq 0$$

b) $\frac{x^3y}{y^4x}$

$$\frac{x^2}{y^3} \quad x \neq 0 \text{ and } y \neq 0$$

c) $\frac{2n - 8n^2}{4n}$

$$\frac{1 - 4n}{2} \quad n \neq 0$$

d) $\frac{db + dc}{db}$

$$\frac{b + c}{b} \quad b \neq 0 \text{ and } d \neq 0.$$

e) $\frac{x^2 - 9b^2}{x^2 - 2xb - 3b^2}$

$$\frac{x + 3b}{x + b}$$

$$x \neq 3b \text{ and } x \neq -b$$

f) $\frac{3n^2 - 5n - 2}{2n - 4}$

$$\frac{3n + 1}{2} \quad n \neq 2$$

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