

Name: _____ Period: _____ Date: _____

Simplifying Rational Expressions Exit Quiz

Simplify the following rational expressions.

1. $\frac{5x-10}{8-4x}$

2. $\frac{4x^2-9}{9-6x}$

3. $\frac{25x^2-4}{14-35x}$

4. $\frac{x^2+6x}{x^2-3x+54}$

5. $\frac{p^2-p-6}{p^2+p-12}$

Simplifying Rational Expressions Exit Quiz

Answer:

Simplify the following rational expressions.

1. $\frac{5x-10}{8-4x}$

Solution:

$$\frac{5x-10}{8-4x} = \frac{5(\cancel{x}-2)}{-4(-\cancel{2}+x)} = -\frac{5}{4}$$

3. $\frac{25x^2-4}{14-35x}$

Solution:

$$\frac{25x^2-4}{14-35x} = \frac{(5x+2)(5x-2)}{-7(-2+5x)} = -\frac{5x+2}{7}$$

5. $\frac{p^2-p-6}{p^2+p-12}$

Solution:

$$\frac{p^2-p-6}{p^2+p-12} = \frac{(\cancel{p}-3)(p+2)}{(p+4)(\cancel{p}-3)} = \frac{p+2}{p+4}$$

2. $\frac{4x^2-9}{9-6x}$

Solution:

$$\frac{4x^2-9}{9-6x} = \frac{(\cancel{2x}-3)(2x+3)}{-3(-\cancel{3}+2x)} = -\frac{2x+3}{3}$$

4. $\frac{x^2+6x}{x^2-3x+54}$

Solution:

$$\frac{x^2+6x}{x^2-3x+54} = \frac{x(\cancel{x}+6)}{(x-9)(\cancel{x}+6)} = \frac{x}{x-9}$$