

04-06 Sample Quiz - Solve Rational Equations**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. Solve the following equation for all possible values of m that make the statement true:

$$\frac{2}{3m} = \frac{1}{m+3}$$

(Be sure to check for extraneous solutions.)

- | | |
|-------------|----------------|
| a. $m = -3$ | c. $m = 6$ |
| b. $m = 3$ | d. No Solution |

- _____ 2. Solve the following equation for x :

$$\frac{3x}{x+2} = \frac{7x+8}{x+2}$$

(Be sure to check for extraneous solutions.)

- | | |
|-------------|----------------|
| a. $x = 2$ | c. $x = \pm 2$ |
| b. $x = -2$ | d. No Solution |

- _____ 3. Solve the following equation for x :

$$\frac{x}{x+2} = \frac{x^2}{x+2} - \frac{6}{x+2}$$

(Be sure to check for extraneous solutions.)

- | | |
|-------------|----------------|
| a. $x = 3$ | c. $x = 3, 2$ |
| b. $x = -2$ | d. No Solution |

_____ 4. Solve the following equation for x :

$$\frac{x^2 + 3x - 10}{x - 2} = 7$$

(Be sure to check for extraneous solutions.)

a. $x = 2$

c. $x = -2, 5$

b. $x = -5$

d. No Solution.

_____ 5. Solve the following equation for x :

$$\frac{x+3}{x-2} - \frac{14}{x+2} = \frac{3x-2}{x^2-4}$$

(Be sure to check for extraneous solutions.)

a. $x = 4$

c. $x = 4, 8$

b. $x = 6$

d. \emptyset

_____ 6. Which graph represents the values of x that make the following inequality true?

$$\frac{x}{x-3} \geq -2$$

