Name: _____ Period: _____ Date: _____

Rational Functions Exit Quiz

Part A Instructions: Choose the option that completes the sentence or answers the question.

1. **The zeros of the numerator of a rational function are the:**

   a. y-intercepts
   b. x-intercepts
   c. vertical asymptotes
   d. horizontal asymptotes

2. **The zeros of the denominator of a rational function are the:**

   a. y-intercepts
   b. x-intercepts
   c. vertical asymptotes
   d. horizontal asymptotes

3. **If the graph of the rational function passes through the point $x = -2$, then:**

   a. $x = -2$ is a vertical asymptote
   b. $x = -2$ is a horizontal asymptote
   c. $x = -2$ is a y-intercept
   d. $x = -2$ is an x-intercept

4. **The vertical asymptotes of $\frac{1}{x}$ are:**

   a. $x = 1$
   b. $x = 0$
   c. $x = 1, -1$
   d. Both b and c

Part B Instructions: Answer the question below.

5. **Solve the equation $\frac{4}{x-2} - \frac{2}{x} = \frac{14}{x^2-2x}$.**

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Rational Functions Exit Quiz

Answers

Part A Instructions: Choose the option that completes the sentence or answers the question.

1. **The zeros of the numerator of a rational function are the:**

   a. y-intercepts
   b. x-intercepts
   c. vertical asymptotes
   d. horizontal asymptotes

2. **The zeros of the denominator of a rational function are the:**

   a. y-intercepts
   b. x-intercepts
   c. vertical asymptotes
   d. horizontal asymptotes

3. **If the graph of the rational function passes through the point $x = -2$, then:**

   a. $x = -2$ is a vertical asymptote
   b. $x = -2$ is a horizontal asymptote
   c. $x = -2$ is a y-intercept
   d. $x = -2$ is an x-intercept

4. **The vertical asymptotes of $\frac{1}{x}$ are:**

   a. $x = 1$
   b. $x = 0$
   c. $x = 1, -1$
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Part B Instructions: Answer the question below.

5. **Solve the equation $\frac{4}{x-2} - \frac{2}{x} = \frac{14}{x^2-2x}$.**

   $x(x-2)\left(\frac{4}{x-2} - \frac{2}{x}\right) = x(x-2)\left(\frac{14}{x(x-2)}\right)$

   $4x - 2(x-2) = 14$

   $4x - 2x + 4 = 14$

   $2x = 10$

   $x = 5$