

NAME: _____

P.I. A.A.15: Find values of a variable for which an algebraic fraction is undefined

1. Which value of x makes the denominator of $f(x) = \frac{6}{-5x+5}$ equal to zero?

[A] $x = -5$ [B] $x = 1$ [C] $x = -1$ [D] $x = 5$

2. Which value of x makes the denominator of $f(x) = -\frac{3}{2x+8}$ equal to zero?

[A] $x = -4$ [B] $x = 8$ [C] $x = 4$ [D] $x = -8$

3. Which value of x makes the denominator of $f(x) = \frac{5}{2x-8}$ equal to zero?

[A] $x = 8$ [B] $x = -4$ [C] $x = -8$ [D] $x = 4$

4. What value of x makes the denominator of the function $y = \frac{x}{x+4}$ zero?

[A] 0.25 [B] -0.25 [C] -4 [D] 0 [E] -1

5. What value of x makes the denominator of $f(x) = \frac{7x+8}{4x-6}$ equal to zero?

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6. What value of x makes the denominator of $f(x) = \frac{-5x+2}{6x-3}$ equal to zero?

7. What value of x makes the denominator of $f(x) = \frac{8x-4}{-3x+1}$ equal to zero?

8. What value of x makes the denominator of $f(x) = \frac{-9x-2}{-3x-4}$ equal to zero?

9. Compare the quantities in Column A and Column B.

Column A

the value of x for which

the denominator of $y = \frac{x}{x-8}$

is zero

Column B

the value of x for which

the denominator of $y = \frac{x}{8-x}$

is zero

[A] The quantity in Column A is greater.

[B] The quantity in Column B is greater.

[C] The quantities are equal.

[D] The relationship cannot be determined from the information given.

10. Write an expression that has -1 and 4 restricted from the domain.

[1] B

[2] A

[3] D

[4] C

[5] $x = \frac{3}{2}$

[6] $x = \frac{1}{2}$

[7] $x = \frac{1}{3}$

[8] $x = -\frac{4}{3}$

[9] C

[10] Answers may vary. Sample: $\frac{1}{x^2 - 3x - 4}$
