

*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?

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.

Integrated Algebra Practice: A.A.15

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[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:  $\frac{1}{x^2 - 3x - 4}$   
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