A.A.15: Undefined Rationals 2: Find values of a variable for which an algebraic fraction is undefined

1 Which value of x makes the expression $\frac{x+4}{x-3}$ undefined?

2 The expression $\frac{x-3}{x+2}$ is undefined when the value of x is

3 Which value of n makes the expression $\frac{5n}{2n-1}$ undefined?

4 For which value of x is the expression $\frac{x+2}{2x-1}$ undefined?

5 Which value of x makes the expression $\frac{x+9}{3x-6}$ undefined?

6 The expression $\frac{2x^2+10x-28}{4x+28}$ is undefined when x is

7 For which value of x is $\frac{x-3}{x^2-4}$ undefined?

8 The expression $\frac{14+x}{x^2-4}$ is undefined when x is

9 The function $y=\frac{x}{x^2-9}$ is undefined when the value of x is

10 The algebraic expression $\frac{x-2}{x^2-9}$ is undefined when x is

11 The expression $\frac{x-7}{9-x^2}$ is undefined when x is

12 Which value of x makes the expression $\frac{x^2-9}{x^2+7x+10}$ undefined?

13 For which set of values of x is the algebraic expression $\frac{x^2-16}{x^2-4x-12}$ undefined?

14 For which values of x is the fraction $\frac{x^2+x-6}{x^2+5x-6}$ undefined?

15 A value of x that makes the expression $\frac{x^2+4x-12}{x^2-2x-15}$ undefined is

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Answer Section

1 ANS:
3

REF: 060817ia

2 ANS:
−2, only

REF: 061315ia

3 ANS:
$\frac{1}{2}$

REF: 060916ia

4 ANS:
$\frac{1}{2}$

REF: 011521ia

5 ANS:
2

REF: 061520ia

6 ANS:
−7, only

$4x + 28 = 0$

$4x = -28$

$x = -7$

REF: 081417ia

7 ANS:
−2

REF: fall0728ia

8 ANS:
−2 or 2

$x^2 - 4 = 0$

$(x + 2)(x - 2) = 0$

$x = \pm 2$

REF: 081225ia

9 ANS:
3 or -3

REF: 010925ia

10 ANS:
3

$$x^2 - 9 = 0$$
$$(x+3)(x-3) = 0$$
$$x = \pm 3$$

REF: 061014ia

11 ANS:
3 and –3

REF: 061429ia

12 ANS:
–5

$$x^2 + 7x + 10 = 0$$
$$(x+5)(x+2) = 0$$
$$x = -5 \text{ or } -2$$

REF: 080918ia

13 ANS:
$\{-2, 6\}$

$$x^2 - 4x - 12 = 0$$
$$(x-6)(x+2) = 0$$
$$x = 6 \; x = -2$$

REF: 061125ia

14 ANS:
1 and –6

$$x^2 + 5x - 6 = 0$$
$$(x+6)(x-1) = 0$$
$$x = -6, 1$$

REF: 011214ia

15 ANS:
5

$$x^2 - 2x - 15 = 0$$
$$(x+3)(x-5) = 0$$
$$x = -3, 5$$

REF: 081316ia