Bellwork Alg 2A Friday, May 19, 2017

State all points of Discontinuity, if any. Classify each point of discontinuity as either a VA or a Hole.

1. $y = \dfrac{2x^3 - 8x}{x^3 - 3x^2 - 10x}$

Pts of Discontinuity:

VA:

Holes:

2. $y = \dfrac{3x^2 + 6x}{x^3 + 2x^2 - 4x - 8}$

Pts of Discontinuity:

VA:

Holes:

3. $y = \dfrac{x^3 + 7x^2 + 12x}{4x^2 + 12}$

Pts of Discontinuity:

VA:

Holes:

Bellwork Alg 2A Friday, May 19, 2017 Answers

State all points of Discontinuity, if any. Classify each point of discontinuity as either a VA or a Hole.

1. $y = \dfrac{2x^3 - 8x}{x^3 - 3x^2 - 10x} = \dfrac{2x(x^2-4)}{x(x^2-3x-10)} = \dfrac{2x(x+2)(x-2)}{x(x-5)(x+2)}$

Pts of Discontinuity: $x = 0, 5, -2$

VA: $x = 5$

Holes: $x = -2, x = 0$

2. $y = \dfrac{3x^2 + 6x}{x^3 + 2x^2 - 4x - 8} = \dfrac{3x(x+2)}{(x+2)(x-2)(x+}$

Pts of Discontinuity: $x = -2, 2$

VA: $x = 2, x = -2$

Holes: None

	x	$+2$
x^2	x^3	$+2x^2$
-4	$-4x$	-8

3. $y = \dfrac{x^3 + 7x^2 + 12x}{4x^2 + 12} = \dfrac{x(x^2+7x+12)}{4(x^2+3)}$

Pts of Discontinuity: None - denominator has no real zeros.

VA:

Holes: