Bellwork Alg 2 Thursday, January 9, 2020

For each Rational Funciton find the following, if any:

a. Holes b. VA c. HA d. X-intercepts e. Y-intercepts

1. $y = \frac{2x^2 + 3}{x^2 - 3x - 4}$

2. $y = \frac{x^2 + 6x + 8}{x^3 + x^2 - 12x}$

3. $y = \frac{x^3 + x^2 - 30x}{x^2 + 2}$

a. Holes

b. VA

c. HA

d. X-int

e. Y-int

a. Holes

b. VA

c. HA

d. X-int

e. Y-int

a. Holes

b. VA

c. HA

d. X-int

e. Y-int

Bellwork Alg 2 Thursday, January 9, 2020

ANSWERS

For each Rational Funciton find the following, if any:

a. Holes b. VA c. HA d. X-intercepts e. Y-intercepts

1. $y = \frac{2x^2+3}{x^2-3x-4}$

$y = \frac{2x^3+3}{(x-4)(x+1)}$ NO REAL zeros

a. Holes NONE

b. VA $x = -1, 4$

c. HA $y = 2$

d. X-int NONE

e. Y-int $y = -3/4$

2. $y = \frac{x^2+6x+8}{x^3+x^2-12x}$

$y = \frac{(x+2)(x+4)}{x(x+4)(x-3)}$

a. Holes $x = -4$

b. VA $x = 0, 3$

c. HA $y = 0$

d. X-int $x = -2$

e. Y-int NONE

$y = \frac{8}{0}$

3. $y = \frac{x^3+x^2-30x}{x^2+2}$

$y = \frac{x(x+6)(x-5)}{x^2+2}$ NO REAL ZEROS

a. Holes NONE

b. VA NONE

c. HA NO H.A.

d. X-int $x = -6, 0, 5$

e. Y-int $y = 0$

$y = \frac{0}{2}$