

Bellwork Alg 2A Tuesday, May 23, 2017

For each Rational Function find the following, if any:

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

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

a. Holes

b. VA

c. HA

d. X-int

e. Y-int

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

a. Holes

b. VA

c. HA

d. X-int

e. Y-int

e. Y-intercepts

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

a. Holes

b. VA

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

a. Holes **NONE**

b. VA **$x = -1, 4$**

c. HA **$y = 2$**

d. X-int **NONE**

e. Y-int **$y = -\frac{3}{4}$**

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

a. Holes **$x = -4$**

b. VA **$x = 0, 3$**

c. HA **$y = 0$**

d. X-int **$x = -2$**

e. Y-int **NONE**

Answers

e. Y-intercepts

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

a. Holes **NONE**

b. VA **NONE**

c. HA **NONE**

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

e. Y-int **$y = 0$**

$$y = \frac{2x^2 + 3}{(x-4)(x+1)} \quad \text{No Real Zeros}$$

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

$$y = \frac{x(x+6)(x-5)}{x^2 + 2} \quad \text{No Real Zeros}$$