1.8 Rational Functions and Zeros

AP Precalculus

Name: _____

CA #2

Find the zeros of the following rational functions.

1. $f(x) = \dfrac{x^2 - 4}{x + 2}$

2. $g(x) = \dfrac{x^2 + 4x}{x^2 - 4x - 12}$

3. $h(t) = \dfrac{t^2 - 2t - 15}{t - 5}$

Use the rational functions to answer the following

4. $f(x) = \dfrac{(x + 4)(x - 2)}{x^2 - 2x}$

a. Domain:

b. Zero(s):

c. Horizontal Asymptote:

d. *y*-intercept:

e. Where is $f(x) < 0$?

5. $d(t) = \dfrac{t^2 - 9}{t + 3}$

a. Domain:

b. Zero(s):

c. Horizontal Asymptote:

d. *y*-intercept:

e. Where is $f(x) > 0$?

6. $r(x) = \dfrac{x^2 - x - 20}{2x - 8}$

a. Domain:

b. Zero(s):

c. Horizontal Asymptote:

d. *y*-intercept:

e. Where is $f(x) < 0$?

Answers to 1.8 CA #2

1. $x = 2$	2. $x = -4$ and 0	3. $t = -3$
4. a. $(-\infty, 0) \cup (0,2) \cup (2, \infty)$ b. $x = -4$ c. $y = 1$ d. none e. $(-4,0)$	5. a. $(-\infty, -3) \cup (-3, \infty)$ b. $x = 3$ c. none d. $(0, -3)$ e. $(3, \infty)$	6. a. $(-\infty, 4) \cup (4, \infty)$ b. $x = -4$ and $x = 5$ c. none d. $\left(0, \frac{5}{2}\right)$ e. $(-\infty, -4) \cup (4,5)$

© The Algebros from FlippedMath.com