Grade 11th ADVANCED
Graphing Rational Functions
EXIT TICKET

Find the domain of each function and the equations of the vertical or horizontal asymptotes, if any. (Example 1)

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

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

3. $f(x) = \dfrac{x(x-1)(x+2)^2}{(x+3)(x-4)}$

4. $g(x) = \dfrac{x - 6}{(x+3)(x+5)}$

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

6. $g(x) = \dfrac{(x-4)(x+2)}{(x+1)(x-3)}$

a. $D = \{x \mid x \neq 4, -3, x \in \mathbb{R}\}$; $x = 4, x = -3$

b. $D = \{x \mid x \neq 2, -2, x \in \mathbb{R}\}$; $x = 2, x = -2, y = 1$

c. $D = \{x \mid x \neq -4, x \in \mathbb{R}\}$; $x = -4$

d. $D = \{x \mid x \neq -3, -5, x \in \mathbb{R}\}$; $x = -3, x = -5, y = 0$

e. $D = \{x \mid x \neq 3, -1, x \in \mathbb{R}\}$; $x = 3, x = -1, y = 1$

f. $D = \{x \mid x \neq 2, -4, x \in \mathbb{R}\}$; $x = 2, x = -4, y = 0$