

HOLE in 3

Date _____ Period _____

Identify the holes of each and state the domain of the function

1) $f(x) = \frac{-3x^2 + 3x + 18}{x^2 - 9}$

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

3) $f(x) = \frac{x}{-x^3 + x^2 + 6x}$

4) $f(x) = \frac{x^2 + 3x - 4}{-3x^2 + 9x}$

5) $f(x) = -\frac{4}{x + 1}$

6) $f(x) = \frac{-3x^2 - 3x + 18}{x^2 + 2x - 3}$

7) $f(x) = \frac{x^3 + 7x^2 + 12x}{4x^2 + 16x}$

8) $f(x) = \frac{x^3 - 16x}{3x^3 - 3x^2 - 18x}$

9) $f(x) = \frac{-x^2 + 6x - 8}{x^2 - 9}$

10) $f(x) = \frac{x^3 - 7x^2 + 12x}{-2x^3 + 2x^2 + 24x}$

$$11) f(x) = \frac{x^3 + 5x^2 + 4x}{4x^2 + 12x}$$

$$12) f(x) = \frac{x^3 - x^2 - 6x}{-3x^3 - 3x^2 + 18x}$$

$$13) f(x) = \frac{x^2 + x - 2}{3x + 3}$$

$$14) f(x) = \frac{-x^2 - 6x - 8}{x^2 + x - 6}$$

$$15) f(x) = \frac{1}{x^2 - 9}$$

$$16) f(x) = \frac{-x^3 - 5x^2 - 6x}{x^3 - x^2 - 2x}$$

$$17) f(x) = \frac{x^2 + x - 12}{-2x^2 - 4x + 16}$$

$$18) f(x) = \frac{x^2 - 1}{-4x}$$

$$19) f(x) = \frac{3x + 3}{x^2 - 1}$$

$$20) f(x) = \frac{x^2 - 16}{-3x^2 + 12}$$