

Unit 2 Worksheet 1

Calculus 1

Find the locations of all holes and the equations of all asymptotes for the following.

	HOLE	VA	HA	SA
1. $f(x) = \frac{3x-15}{x^2-3x-10}$	(5, 3/7)	x = -2	y = 0	None
2. $f(x) = \frac{x-1}{x^2-9}$	None	x = 3,-3	y = 0	None
3. $f(x) = \frac{x^2}{x-1}$	None	x = 1	None	y = x+1
4. $f(x) = \frac{x^4-2}{x^3+1}$	None	x = -1	None	y = x
5. $f(x) = \frac{3x^2}{x^2-x}$	(0,0)	x = 1	y = 3	None
6. $f(x) = \frac{x}{x^2+x-6}$	None	x = -3,2	y = 0	None
7. $f(x) = \frac{5x^2-2x+1}{x}$	None	x = 0	None	y = 5x -2
8. $f(x) = \frac{3x^2+5x-2}{2x^2+7x+6}$	(-2,7)	x = -3/2	y = 3/2	None
9. $f(x) = \frac{x^3+3x^2-4x+5}{x^2+7}$	None	None	None	y = x+3
10. $f(x) = \frac{2x^2-5x-3}{x^2-4x+3}$	(3, 7/2)	x = 1	y = 2	None