

Holes

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

x	y
-10	-8
-9	-7
-8	-6
-7	-5
-6	-4
-5	-3
-4	-2
-3	-1
-2	hole (0)
-1	1
0	2
1	3
2	4
3	5
4	6
5	7
6	8
7	9
8	10
9	
10	

2. $f(x) = \frac{x^3-x^2-20x}{x^2-10x+25} = \frac{x(x^2-x-20)}{(x-5)(x-5)}$

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

x	y
-10	-4
-9	-3.2
-8	-2.5
-7	-1.8
-6	-1.1
-5	-.5
-4	0
-3	.4
-2	.6
-1	.8
0	0
1	-1.3
2	-2
3	-2.7
4	-3.2
5	Asymptote
6	6.0
7	
8	
9	
10	

3. $f(x) = \frac{x^2+8x+7}{x+1} = \frac{(x+7)(x+1)}{x+1}$

$f(x) = x+7$

x	y
-10	
-9	
-8	
-7	
-6	
-5	
-4	
-3	
-2	
-1	hole
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	