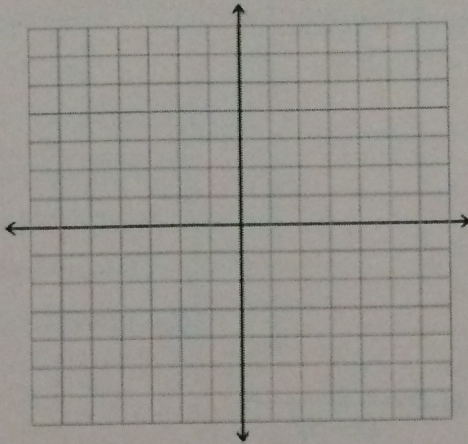
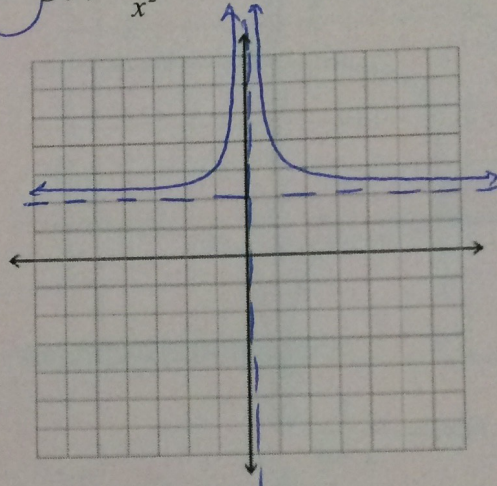


Graph the Following functions:

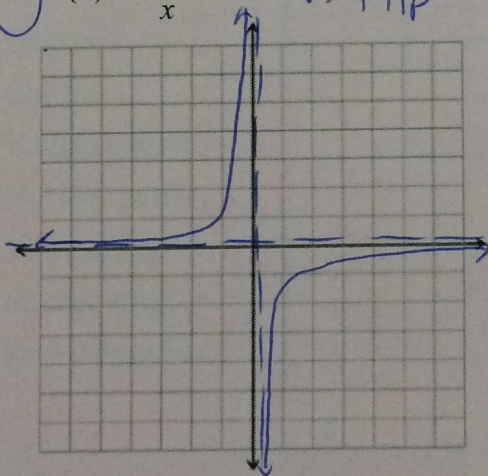
1. $f(x) = \frac{1}{x+2}$



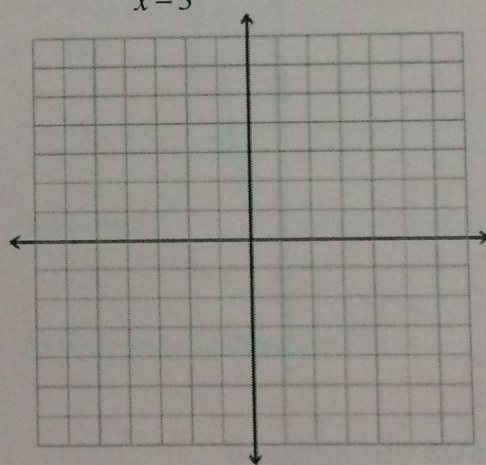
2. $g(x) = \frac{1}{x^2} + 2$ Up 2



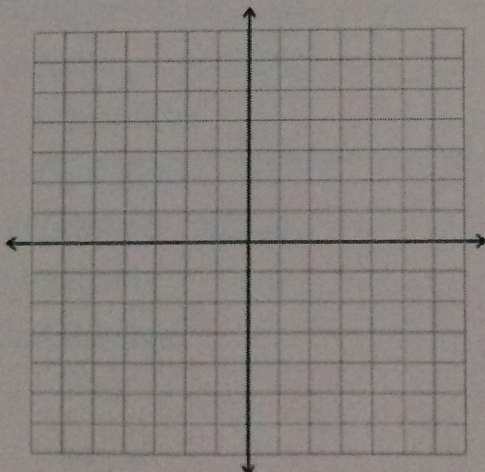
3. $h(x) = -\frac{1}{x}$ V. Flip



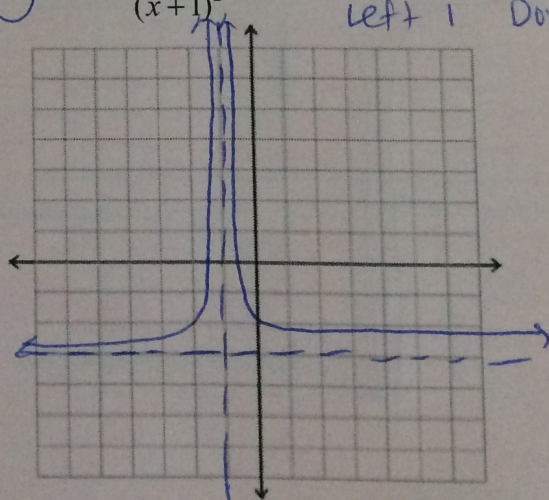
4. $p(x) = \frac{1}{x-3} + 2$



5. $k(x) = -\frac{1}{x^2}$



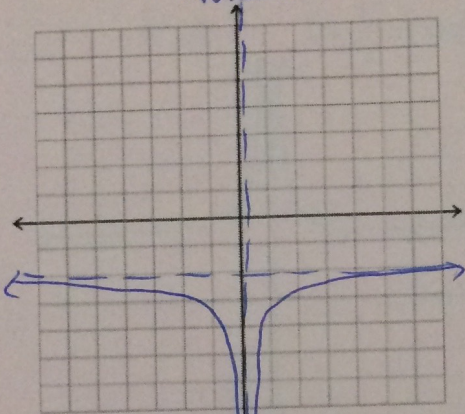
6. $f(x) = \frac{1}{(x+1)^2} - 3$ Volcano Left 1 Down 3



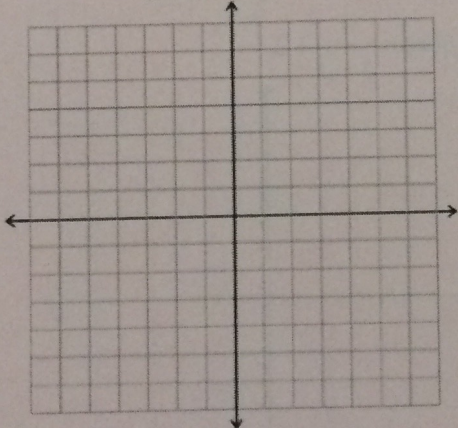
Secondary III
7-1 HW Simple Rational Functions

Name: _____
Period: _____

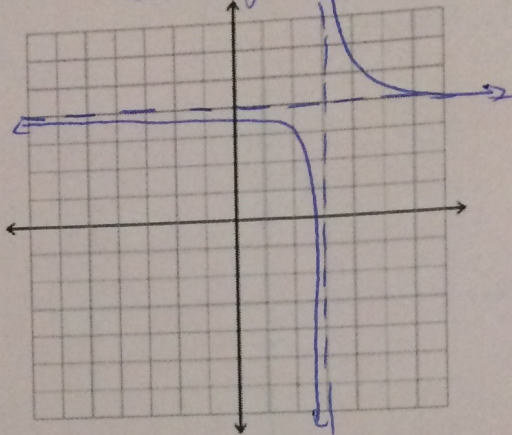
7. $f(x) = -\frac{1}{x^2} - 2$
V Flip
Down 2
x volcano



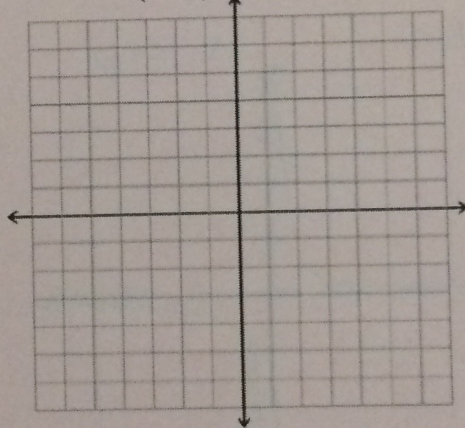
9. $f(x) = -\frac{1}{x+4}$



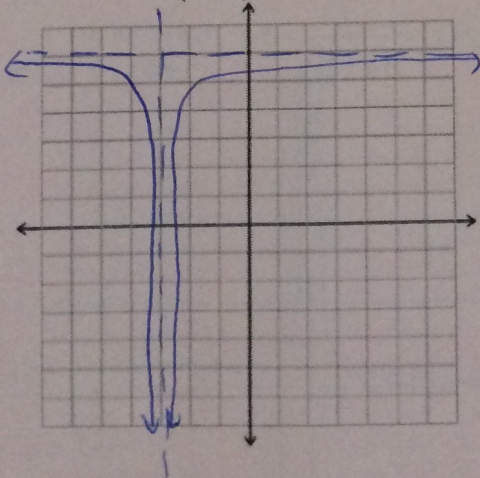
8. $p(x) = \frac{1}{x-3} + 4$
Right 3
up 4



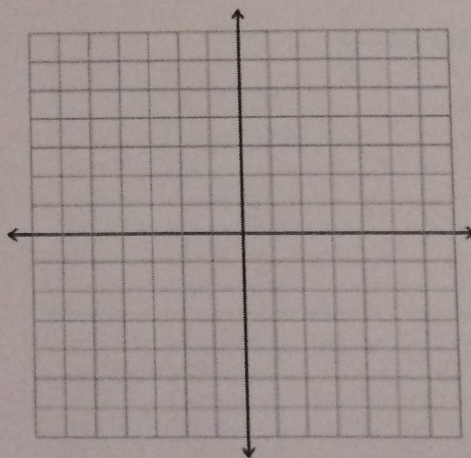
10. $g(x) = \frac{1}{(x-3)^2} - 5$



11. $k(x) = -\frac{1}{(x+3)^2} + 6$



12. $f(x) = -\frac{1}{x+2} - 3$



volcano
flip
left 3
up 6

Give the function and analyze the following graphs:

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

Domain: $(-\infty, 4) \cup (4, \infty)$

Range: $(-\infty, 2) \cup (2, \infty)$

V Asymptote: $x = 4$

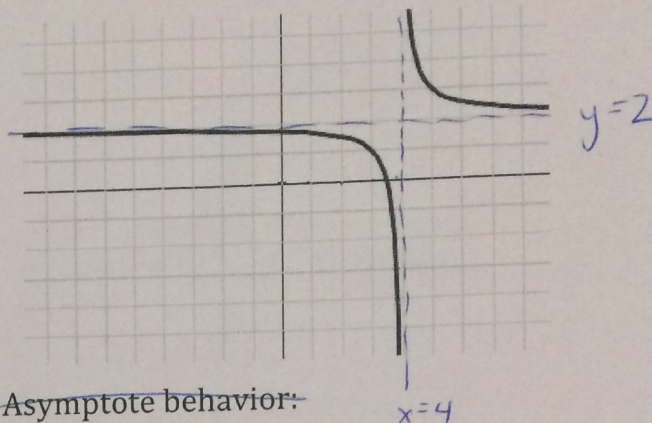
H Asymptote: $y = 2$

x-values { increasing: None
decreasing: $(-\infty, 4) \cup (4, \infty)$

End Behavior:

$\lim_{x \rightarrow -\infty} f(x) = 2$

$\lim_{x \rightarrow \infty} f(x) = 2$



Asymptote behavior:

14. $g(x) =$

Domain:

Range:

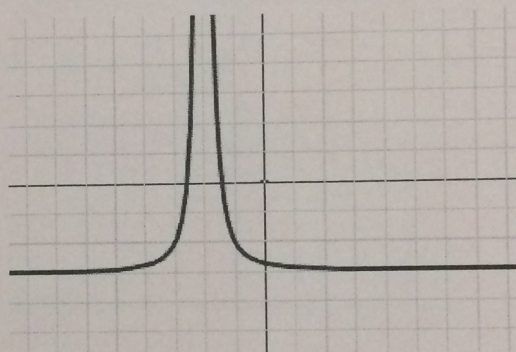
V Asymptote:

H Asymptote:

increasing:

decreasing:

End Behavior:



Asymptote behavior:

15. $h(x) = \frac{1}{x} - 3$

Domain: $(-\infty, 0) \cup (0, \infty)$

Range: $(-\infty, -3) \cup (-3, \infty)$

V Asymptote: $x = 0$

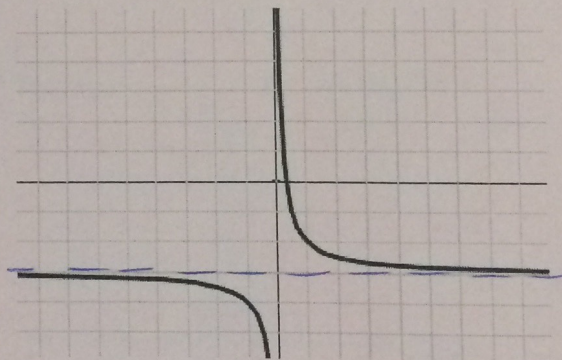
H Asymptote: $y = -3$

x-values { increasing: None
decreasing: $(-\infty, 0) \cup (0, \infty)$

End Behavior:

$\lim_{x \rightarrow -\infty} f(x) = -3$

$\lim_{x \rightarrow +\infty} f(x) = -3$



Asymptote behavior: