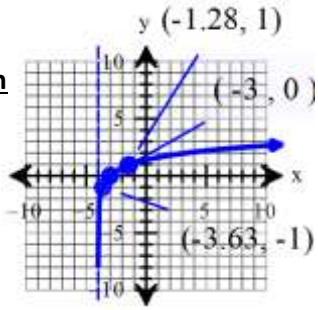
SM3 9.4 Shorter answers 40 Points total

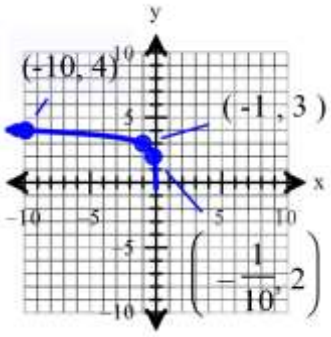
1. $(0, \infty)$
2. $\left(\frac{1}{a}, -1\right), (1, 0), (a, 1)$
3. false
4. true
5. $(3, \infty)$
6. $(10, \infty)$
7. $(-4, \infty)$
8. $(-\infty, -2)$

9-16 are worth 4points each

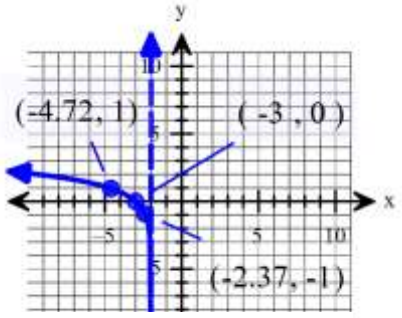
9. Domain: $(-4, \infty)$
VA: $x = -4$, translate left 4
Range: $(-\infty, \infty)$



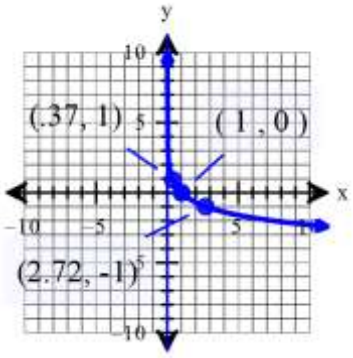
10. Domain: $(-\infty, 0)$
VA: $x = 0$
reflect over y-axis,
translate up 3
Range: $(-\infty, \infty)$



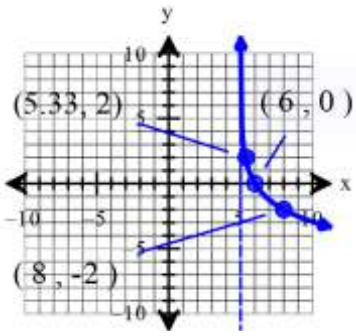
11. Domain: $(-\infty, -2)$
VA: $x = -2$, reflect over y-axis,
translate left 2
Range: $(-\infty, \infty)$



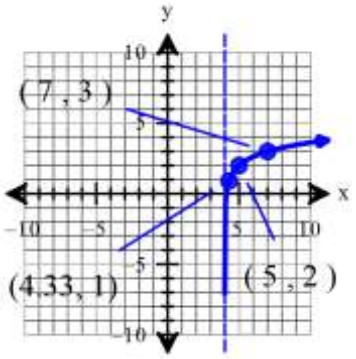
12. Domain: $(0, \infty)$
VA: $x = 0$, reflect over x-axis
Range: $(-\infty, \infty)$



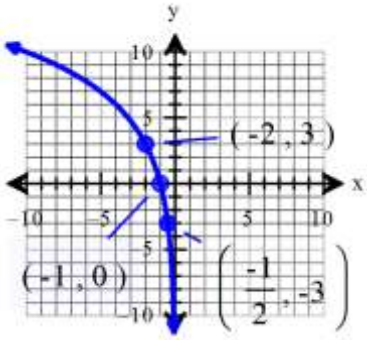
13. Domain: $(5, \infty)$, VA: $x = 5$
Reflect over x-axis, vertical
stretch of 2, translate right 5
Range: $(-\infty, \infty)$



14. Domain: $(4, \infty)$, VA: $x = 4$
translate right 4, up 2
Range: $(-\infty, \infty)$



15. Domain: $(-\infty, 0)$, VA: $x = 0$
Vertical stretch of 3, reflect over y-axis
Range: $(-\infty, \infty)$



16. Domain: $(-\infty, \infty)$
Asymptote: $y = 0$
Range: $(-\infty, 0)$
Key Points: (-3, $\frac{-1}{4}$)
(-2, -1)
(-1, -4)
Give yourself points if you graphed this one using the key points listed above.