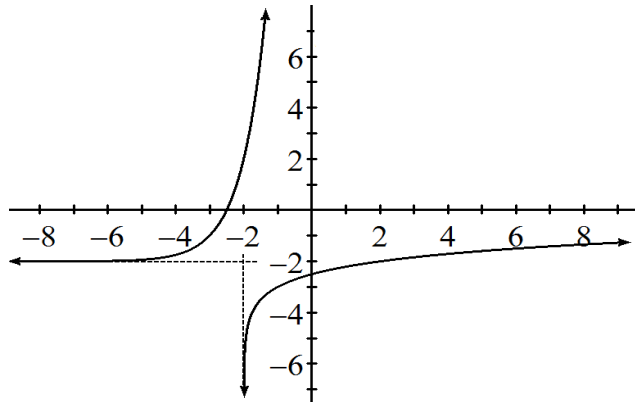


LOGARITHMS REVIEW ANSWER KEY

1. $\frac{7}{4}$
2. $-\frac{2}{3}$
3. $2x$
4. \sqrt{c}
5. $\frac{5}{8}$
6. k^6
7. -5
8. ≈ 4.55
9. 1
10. -13
11. $\frac{1}{27}$
12. ≈ 2.24
13. $\log_{\pi}\left(\frac{1}{3a\sqrt{b}}\right)$
14. all true
15. all true except I
16. $\frac{2a}{3}$
17. $2x - 4$
18. $-f(x)$ (reflected in x -axis)
19. a) 23.67 million
b) 24.05 years
c) 41.11 years
20. a) 216.74 min.
b) 0.46 g
21. 0.389
22. a) 11.55
b) 7.399
23. a) 6.35
b) 47.55 days
24. a) 6.6089 %
b) 15.964 years
25. 52 726 years
26. a) 653 000
b) 15.75 years
c) $\frac{\ln 1.5}{8} \approx 0.050683$
27. 10.41%
28. a)



b) x -int: 62; y -int: -2.5

c) $f^{-1}(x) = 4^{x+3} - 2$

29. $x = \frac{5 \log 3 + \log 7 + \log 5}{2 \log 3 - \log 5}$

30. $x = -1$