

## Section 5.2: Logarithmic Functions

### Answers

1.  $x = \log(0.75) = -0.125$  (Here I've chosen to round to 3 decimals for my answers, but as I didn't specify in my question how many I wanted, anything reasonable will do.)

2.  $x = \log(12\,345) = 4.091$

3.  $x = \frac{1}{2}\log(37) = 0.784$

4.  $x = \log(23.7) - 5 = -3.625$

5.  $x = 1 - \log(0.002) = 3.699$

6.  $x = \frac{\log(8) - 3}{2} = -1.048$

7.  $x = \ln 9 - 2 = 0.197$

8.  $x = -\frac{1}{2}\ln(18) = -1.445$

9.  $x = \frac{\ln 0.7 + 1}{3} = 0.214$

10.  $x = 4$  (this answer is exact, so doesn't need a decimal approximation)

11.  $x = \frac{2 - \ln(157)}{5} = -0.611$

12.  $x = \ln \pi - 1 = 0.145$

13. 2

14. -4

15. 0

16. -3

17. undefined

$$18. 4$$

$$19. 1$$

$$20. 1/3$$

$$21. \ln y = x$$

$$22. 2^y = x$$

$$23. \log_h f = 2$$

$$24. \log_n m = p$$

$$25. x^y = 2$$

$$26. \log_k 10 = m$$

$$27. 2^x = y$$

$$28. 6^8 = c$$