



1. Find the value of  $x$  if  $\log_x 4 = 2$

- (i) (-1) (ii) 4 (iii) 1 (iv) 2 (v) 3

2. Find the value of  $x$  if  $\log_2 x = 3$

- (i) 5 (ii) 11 (iii) 9 (iv) 7 (v) 8

3. Find the value of  $x$  if  $\log_5 625 = x$

- (i) 2 (ii) 7 (iii) 3 (iv) 4 (v) 5

4. Find the value of  $x$  if  $\log_{\sqrt{3}}(7x+1) = 2$

- (i) 0 (ii)  $\frac{2}{5}$  (iii)  $\frac{2}{7}$  (iv)  $\frac{2}{9}$  (v)  $\frac{4}{7}$

5. Find the value of  $x$  if  $\log_x \frac{1}{125} = -3$

- (i) 4 (ii) 2 (iii) 6 (iv) 8 (v) 5

6. Find the value of  $x$  if  $\log(x+5) + \log(x-5) = \log 2$

- (i)  $(9, (-9))$  (ii)  $(3\sqrt{3}, (-3\sqrt{3}))$  (iii)  $(3\sqrt{3}, (-9))$  (iv)  $(9, (-3\sqrt{3}))$

7. Find the value of  $x$  if  $\log_9(x+3) - \log_9(x-3) = 1$

- (i)  $\frac{7}{2}$  (ii)  $\frac{15}{4}$  (iii)  $\frac{17}{4}$  (iv)  $\frac{9}{2}$  (v)  $\frac{13}{4}$

8. Find the value of  $x$  if  $\log_3(x^2-16) = 2$

- (i)  $(5, (-5))$  (ii)  $(5, (-4))$  (iii)  $(6, (-5))$  (iv)  $(6, (-4))$

9. Solve  $\frac{\log x}{\log 3} = \frac{\log 25}{\log \frac{1}{5}}$

- (i)  $\frac{1}{9}$  (ii)  $(-\frac{1}{9})$  (iii)  $\frac{1}{11}$  (iv)  $\frac{1}{3}$  (v)  $\frac{1}{7}$

10. If  $\frac{\log(x^2+9)}{\log 2x^2} = 1$ , find x

- (i) (-3,2) (ii) (-2,4) (iii) (-3,3) (iv) (-1,3) (v) (2,-3)

## Assignment Key

---

1) (iv)

2) (v)

3) (iv)

4) (iii)

5) (v)

6) (ii)

7) (ii)

8) (i)

9) (i)

10) (iii)