

EduSahara™ Learning Center Assignment**Grade : Class X, SSC****Chapter : Real Numbers****Name : Solving Logarithmic Equations**

1. Find the value of x if $\log_x 625 = 4$

- (i) 3 (ii) 7 (iii) 5 (iv) 4 (v) 6
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2. Find the value of x if $\log_4 x = 4$

- (i) 253 (ii) 257 (iii) 258 (iv) 255 (v) 256
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3. Find the value of x if $\log_4 64 = x$

- (i) 3 (ii) 2 (iii) 4 (iv) 1 (v) 6
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4. Find the value of x if $\log_{\sqrt{5}} (4x+3) = 2$

- (i) $\frac{3}{2}$ (ii) 1 (iii) $(-\frac{1}{2})$ (iv) $\frac{1}{2}$ (v) $\frac{1}{4}$
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5. Find the value of x if $\log_x \frac{1}{81} = -4$

- (i) 2 (ii) 1 (iii) 6 (iv) 3 (v) 4
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6. Find the value of x if $\log(x+1) + \log(x-1) = \log 3$

- (i) $(2, -1)$ (ii) $(3, -2)$ (iii) $(2, -2)$ (iv) $(3, -1)$
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7. Find the value of x if $\log_3(x+5) - \log_3(x-5) = 1$

- (i) 13 (ii) 10 (iii) 9 (iv) 11 (v) 8
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8. Find the value of x if $\log_3(x^2-7) = 2$

- (i) $(4, -4)$ (ii) $(4, -3)$ (iii) $(5, -3)$ (iv) $(5, -4)$
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9. Solve $\frac{\log x}{\log 7} = \frac{\log 9}{\log \frac{1}{3}}$

- (i) $\frac{3}{49}$ (ii) $\frac{1}{49}$ (iii) $\frac{1}{47}$ (iv) $\frac{1}{51}$ (v) $(\frac{-1}{49})$
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10. If $\frac{\log (x^2+1)}{\log 2x^2} = 1$, find x

- (i) $(-1, 1)$ (ii) $(2, 1)$ (iii) $(0, 2)$ (iv) $(0, -1)$ (v) $(-1, 0)$
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Assignment Key

- 1) (iii)
- 2) (v)
- 3) (i)
- 4) (iv)
- 5) (iv)
- 6) (iii)
- 7) (ii)
- 8) (i)
- 9) (ii)
- 10) (i)