

Exponential Equations with Logarithms

Solve each equation. Round your answers to the nearest ten-thousandth.

1) $17^v = 62$

2) $9^k = 39$

3) $9^n = 29$

4) $13^x = 15$

5) $10^b = 74$

6) $20^r = 58$

7) $15^x = 47$

8) $13^r = 79$

9) $8 \cdot 13^{7x} = 73$

10) $-8 \cdot 9^{-5x} = -49$

11) $9 \cdot 9^{k+2} = 59$

12) $17^{k-10} + 4 = 66$

$$13) 5^{4x} + 5 = 91$$

$$14) 10^{-9n} + 8 = 34$$

$$15) e^{r+4} + 6 = 29$$

$$16) -10 \cdot 8^{-5n} = -81$$

$$17) 5.9e^{10x-8} + 0.7 = 43$$

$$18) -3e^{5a+1} - 7 = -91$$

$$19) -5.3e^{8x+5} + 2.9 = -27$$

$$20) -4e^{2.2n-7} + 1 = -59$$

$$21) 7e^{2-3x} + 3 = 92$$

$$22) -5e^{-6m-8} - 6 = -37$$

$$23) 5e^{2.9m-2} + 6 = 94$$

$$24) -3e^{4x+1} - 2 = -98$$

Exponential Equations with Logarithms

Solve each equation. Round your answers to the nearest ten-thousandth.

1) $17^v = 62$

1.4567

2) $9^k = 39$

1.6674

3) $9^n = 29$

1.5325

4) $13^x = 15$

1.0558

5) $10^b = 74$

1.8692

6) $20^r = 58$

1.3554

7) $15^x = 47$

1.4217

8) $13^r = 79$

1.7035

9) $8 \cdot 13^{7x} = 73$

0.1231

10) $-8 \cdot 9^{-5x} = -49$

-0.165

11) $9 \cdot 9^{k+2} = 59$

-1.1442

12) $17^{k-10} + 4 = 66$

11.4567

13) $5^{4x} + 5 = 91$

0.6919

14) $10^{-9n} + 8 = 34$

-0.1572

15) $e^{r+4} + 6 = 29$

-0.8645

16) $-10 \cdot 8^{-5n} = -81$

-0.2012

17) $5.9e^{10x-8} + 0.7 = 43$

0.997

18) $-3e^{5a+1} - 7 = -91$

0.4664

19) $-5.3e^{8x+5} + 2.9 = -27$

-0.4087

20) $-4e^{2.2n-7} + 1 = -59$

4.4128

21) $7e^{2-3x} + 3 = 92$

-0.1809

22) $-5e^{-6m-8} - 6 = -37$

-1.6374

23) $5e^{2.9m-2} + 6 = 94$

1.6786

24) $-3e^{4x+1} - 2 = -98$

0.6164