

A.CED.A.1: Exponential Equations 3

- 1 If $7^x = 3$, then x is equal to
 - 1) $(\log 3)(\log 7)$
 - 2) $\log 3 - \log 7$
 - 3) $\frac{\log 3}{\log 7}$
 - 4) $\frac{\log 7}{\log 3}$
- 2 Using logarithms, solve the equation $3^{2x} = 4$ for x to the *nearest tenth*.
- 3 Using logarithms, solve the equation $(1.95)^x = 54$ for x to the *nearest integer*.
- 4 Using logarithms, solve the equation $5^x = 17$ for x to the *nearest tenth*.
- 5 Using logarithms, find x to the *nearest tenth*:
 $3^{2x} = 5$
- 6 Using logarithms, find x to the *nearest tenth*:
 $3^{2x} = 100$
- 7 Solve for x to the *nearest tenth*: $5^{3x} = 1,000$
- 8 Solve for x to the *nearest tenth*. $5^x = 30$
- 9 Solve for x to the *nearest hundredth*: $6^x = 45$
- 10 Find x to the *nearest hundredth*: $3^x = 6$
- 11 Using logarithms, find w to the *nearest hundredth*:
 $5^{2w} + 9 = 40$
- 12 What is the value of x in the equation $3^x = 148$, expressed to the *nearest hundredth*?
- 13 Given: $y = 4.1^x$
Find x , to the *nearest tenth*, when $y = 26$.
- 14 Using logarithms, solve for x to the *nearest hundredth*: $5^x = 1,325$

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Answer Section

1 ANS: 3

$$7^x = 3$$

$$\log 7^x = \log 3$$

$$x \log 7 = \log 3$$

$$x = \frac{\log 3}{\log 7}$$

REF: 061009b

2 ANS:

0.6

REF: 068038siii

3 ANS:

6

REF: 088437siii

4 ANS:

1.8

REF: 088536siii

5 ANS:

0.7

REF: 089438siii

6 ANS:

2.1

REF: 089542siii

7 ANS:

1.4

REF: 069641siii

8 ANS:

2.1

REF: 019737siii

9 ANS:

2.12

REF: 089739siii

10 ANS:

1.63

REF: 019939siii

11 ANS:
1.07

REF: 010041siii

12 ANS:
4.55

REF: 060109siii

13 ANS:
2.3

REF: 010240siii

14 ANS:
4.47

REF: 080339siii