

Algebra II Practice F.LE.A.4: Exponential Equations

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NAME: _____

1. Find x if $e^{5.1x} = 5$, and you are given $\ln 5 = 1.6094$.
- [A] 0.3156 [B] 3.1688
[C] 1.0200 [D] 0.1961
2. Find x if $e^{9.5x} = 3$, and you are given $\ln 3 = 1.0986$.
- [A] 3.1667 [B] 0.1156
[C] 0.1053 [D] 8.6473
3. Find x if $e^{5.3x} = 2$, and you are given $\ln 2 = 0.6931$.
- [A] 2.6500 [B] 0.1887
[C] 7.6463 [D] 0.1308
4. Solve for x correct to four decimal places:
 $e^{-4x} = 7.5$
5. Solve for x correct to four decimal places:
 $e^{-6x} = 7.8$
6. Solve $114 = 6e^{0.095t}$. Round your answer to the nearest hundredth.
7. Solve $99 = 9e^{0.04t}$. Round your answer to the nearest hundredth.
8. Solve $e^{2x} + 5 = 8$ using a graphing calculator.
9. Compare the quantity in Column A with the quantity in Column B.
- | <u>Column A</u> | <u>Column B</u> |
|-----------------------|-----------------|
| x , when $e^x = 15$ | e^e |
- [A] The quantity in Column A is greater.
[B] The quantity in Column B is greater.
[C] The two quantities are equal.
[D] The relationship cannot be determined on the basis of the information supplied.
10. Compare the quantity in Column A with the quantity in Column B.
- | <u>Column A</u> | <u>Column B</u> |
|---------------------------|---------------------------|
| x , when $10^{4x} = 52$ | y , when $4^{3y} = 100$ |
- [A] The quantity in Column A is greater.
[B] The quantity in Column B is greater.
[C] The two quantities are equal.
[D] The relationship cannot be determined on the basis of the information supplied.

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[1] A

[2] B

[3] D

[4] -0.5037

[5] -0.3424

[6] 30.99

[7] 59.95

[8] 0.549

[9] B

[10] B