

Algebra 2

Weos. 11-14-12

Class Notes

$$\textcircled{63} \quad \frac{-6 \cdot 2^{N+6}}{-6} = \frac{-6^7}{-6}$$

$$2^{N+6} = \frac{6^7}{6}$$

$$\log(2^{N+6}) = \log\left(\frac{6^7}{6}\right)$$

$$(N+6) \log 2 = \log\left(\frac{6^7}{6}\right)$$

COB

$$\log_b X = \frac{\log X}{\log b}$$

$$N+6 = \frac{\log\left(\frac{6^7}{6}\right)}{\log 2}$$

$$N = \log_2\left(\frac{6^7}{6}\right) - 6$$

$$(75) \log_6(-4x-7) = \log_6(-x-10)$$

$$\begin{array}{rcl} & \swarrow & \searrow \\ -4x-7 & = & -x-10 \\ +4x & & +4x \end{array}$$

$$\begin{array}{rcl} -7 & = & 3x-10 \\ +10 & & +10 \end{array}$$

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

$$\boxed{1 = x}$$

$$\underline{\underline{OK}} \log_6(-4(1)-7) \stackrel{?}{=} \log_6(-(1)-10)$$

$$\log_6(-11) \stackrel{?}{=} \log_6(-11)$$

UNDEFINED UNDEFINED

NO SOLUTION ✓

$$(70) \quad \frac{3 \cdot 2^{9x}}{3} = \frac{41}{3}$$

$$2^{9x} = \frac{41}{3}$$

$$\log(2^{9x}) = \log\left(\frac{41}{3}\right)$$

$$(9x)\log 2 = \log\left(\frac{41}{3}\right)$$

$$9x = \frac{\log\left(\frac{41}{3}\right)}{\log 2}$$

$$9x = \log_2\left(\frac{41}{3}\right)$$

$$x = \frac{\log_2\left(\frac{41}{3}\right)}{9}$$

C.

$$\textcircled{92} \quad \frac{-2 \log_6 (a+2)}{-2} = \frac{4}{-2}$$

$$\log_6 (a+2) = -2$$

$$6^{-2} = a+2$$

$$\frac{1}{36} = a+2$$

$$-\frac{72}{36} + \frac{1}{36} = a$$

$$\boxed{-\frac{71}{36} = a}$$

$$\underline{\underline{ck}} \quad -2 \log_6 \left(\left(-\frac{71}{36} \right) + \frac{72}{36} \right) \stackrel{?}{=} 4$$

$$-2 \log_6 \left(\frac{1}{36} \right) \stackrel{?}{=} 4$$

$$(-2)(-2) \stackrel{?}{=} 4 \checkmark$$

$$\textcircled{93} \quad \log_6(-3x) + 2 = 3$$

$$\log_6(-3x) = 1$$

$$6^1 = -3x \quad \downarrow$$

$$\boxed{-2 = x}$$

$$\underline{\underline{\text{ck}}} \quad \log_6(-3(-2)) + 2 \stackrel{?}{=} 3$$

$$\log_6 6 + 2 \stackrel{?}{=} 3 \checkmark$$

$$6^x = 6$$

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