Functions 11U Name_____

Logarithms Practice

Solve each equation. Round your answers to the nearest 4 decimal places (nearest ten-thousandth). Check your work (answers are on the back).

1) $19^x = 70$

$\Rightarrow x \cdot \log(19) = \log(70)$

$\Rightarrow x = \frac{\log(70)}{\log(19)} \approx 1.44$

2) $9^k = 17$

$k \log(9) = \log(17)$

$\Rightarrow k = \frac{\log(17)}{\log(9)} \approx 1.29$

3) $13^r = 23$

4) $5^n - 5 = 84$

$5^n = 89$

$\Rightarrow n = \frac{\log(89)}{\log(5)} \approx 2.79$

5) $6^x + 9 = 79$

6) $-8.1 \cdot 4^n = -73$

7) $14^n + 7.9 = 88$

8) $13^{3k} + 3 = 95$

$13^{(3k)} = 92$

$(3k)\log(13) = \log(92)$

$\Rightarrow 3k = \frac{\log(92)}{\log(13)}$

$\Rightarrow 3k \approx 1.76$

$\Rightarrow k = \frac{1.76}{3}$

≈ 0.59

9) $7 \cdot 6^{-4b} = 52$

10) $-5^{p-3} = -19$

Answers to Logarithms Practice

1) 1.4429
2) 1.2895
3) 1.2224
4) 2.7889
5) 2.3711
6) 1.586
7) 1.6609
8) 0.5876
9) −0.2798
10) 4.8295