Logarithms

ACMNA267 – Real Numbers

Teachers Teaching with Technology™
Professional Development from Texas Instruments

Name: _____

Score: _____

Teacher: _____


Assessment


TI-Navigator


Student


30 min

Q.1. If $a > 0$ and $b > 0$ then $\log(a \cdot b)$ is equal to:

a) $a \cdot b$ b) $a + b$ c) $\log(a) \cdot \log(b)$

d) $\log(a) + \log(b)$ e) None of these

Q.2. If $a > 0$ then $\log(a^n)$ is equal to:

a) $n \cdot \log(a)$ b) $n + \log(a)$ c) $a \cdot \log(n)$

d) $\log(a) + \log(n)$ e) None of these

Q.3. If $a > 0$ and $b > 0$ then $\log\left(\frac{a}{b}\right)$ is equal to:

a) $\log(b) - \log(a)$ b) $\log(a) - \log(b)$ c) $\log(a) \cdot \log(b)$

d) $\dfrac{\log(a)}{\log(b)}$ e) None of these

Q.4. If $2^x = 5$ then:

a) $\log_x(2) = 5$ b) $\log_2(x) = 5$ c) $x = 2.5$

d) $x = 2 \cdot \log_{10}(5)$ e) $x = \log_2(5)$

Q.5. Which one of the following statements is true?

a) $\log_2 2 < \log_8 8$ b) $\log_8 2 < \log_2 8$ c) $\log_2 2 = 0$

d) $\log_2 1 = 2$ e) $\log_2 2 = \log_8 8$

Q.6. $\log_2 16 + \log_2 8$ is equal to:

a) 2 b) $\log_2 8$ c) $\log_2 2$ d) 7 e) $\log_2 24$

Q.7. $\log_{10}(5^x \cdot 10^3)$ is equal to:

a) $\log_{10}\left(50^{3x}\right)$ b) $3x\log_{10}(50)$ c) $3x + \log_{10}(50)$

d) $3 + x\log_{10}(5)$ e) $x\log_{10}\left(\frac{1}{2}\right) + 3$

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Q.8. If $\log_{10}(y) = \log_{10}(x) + 2$ then

a) $\dfrac{\log_{10}(y)}{\log_{10}(x)} = 2$ b) $\log_{10}\left(\dfrac{y}{x}\right) = 2$ c) $\log_{10}\left(\dfrac{x}{y}\right) = 2$

d) $\log_{10}(x+y) = 2$ e) $\log_{10}(x-y) = 2$

Q.9. If $\log_4\left(\dfrac{1}{a}\right) = -1$, then a equals:

a) 1 b) 4 c) -4 d) $\dfrac{1}{4}$ e) $-\dfrac{1}{4}$

Q.10. If $\log_a(12) = 1.079$ and $\log_a(3) = 0.477$ then $\log_a(4)$ is equal to:

a) $\log_a(1.079 - 0.477)$ b) $\dfrac{1.079}{0.477}$ c) $1.079 - 0.477$

d) $\log_a\left(\dfrac{1.079}{0.477}\right)$ e) None of these

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