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Class 9 Mathematics Chapter 2: Logarithms Exercise 2.5 MCQs – Online Practice | FBISE

Class 9 Mathematics · Chapter 2: Logarithms

Name: _____ Date: _____ Score: _____ / 20

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1. Expand $\log 9t$.

A) $\log 9 \cdot \log t$
B) $\log 9 + \log t$
C) $\log 9 - \log t$
D) $\log (9 + t)$

2. Expand $\log \dfrac{59}{s}$.

A) $\log 59 + \log s$
B) $\dfrac{\log 59}{\log s}$
C) $\log 59 - \log s$
D) $\log (59 - s)$

3. Expand $\log \dfrac{5pq^2}{xy^3}$.

A) $\log 5 + \log p + 2\log q - \log x - 3\log y$
B) $\log 5 + \log p + 2\log q - \log x + 3\log y$
C) $\log 5 + \log p + \log q^2 + \log x + \log y^3$
D) $\log 5 \cdot \log p \cdot 2\log q - \log x \cdot 3\log y$

4. Expand $\log \sqrt{\dfrac{53.3}{46.4}}$.

A) $2(\log 53.3 - \log 46.4)$
B) $\log 53.3 - \log 46.4$
C) $\dfrac{1}{2}(\log 53.3 + \log 46.4)$
D) $\dfrac{1}{2}(\log 53.3 - \log 46.4)$

5. Combine $3\log x - 5\log y$ into a single logarithm.

A) $\log (x^3y^5)$
B) $\log \dfrac{3x}{5y}$
C) $\log \dfrac{x^3}{y^5}$
D) $\log (x - y)^{-2}$

6. Combine $\dfrac{1}{2}\log t + \dfrac{1}{3}\log r - \dfrac{1}{5}\log s$ into a single logarithm.

A) $\log \dfrac{\sqrt{t}\,\sqrt[3]{r}}{\sqrt[5]{s}}$
B) $\log \left(\sqrt{t}\,\sqrt[3]{r}\,\sqrt[5]{s}\right)$
C) $\log \left(\dfrac{t}{2} + \dfrac{r}{3} - \dfrac{s}{5}\right)$
D) $\log \dfrac{\sqrt{t}\,\sqrt[5]{s}}{\sqrt[3]{r}}$

7. Combine $2\log 5 + 3\log 2$ into a single logarithm and simplify.

A) $\log 16$
B) $\log 200$
C) $\log 31$
D) $\log 100$

8. Evaluate $\log_2 15$ using $\log 3 = 0.4771$, $\log 5 = 0.6990$ and $\log 2 = 0.3010$.

A) 3.907
B) 2.907
C) 4.907
D) 1.176

9. Evaluate $\log_9 \sqrt[3]{9}$.

A) 3
B) $\dfrac{1}{3}$
C) $\dfrac{1}{9}$
D) 9

10. Evaluate $\log_{\sqrt{7}} 343$.

A) 3
B) $\dfrac{3}{2}$
C) 6
D) 9

11. If $\log_b 2 = 0.3010$, $\log_b 3 = 0.4771$ and $\log_b 5 = 0.6990$, find $\log_b \dfrac{6}{5}$.

A) 0.0791
B) 1.4771
C) 0.7781
D) 0.1761

12. With the same values, find $\log_b \dfrac{100}{9}$.

A) 2.9542
B) 1.0458
C) 1.9542
D) 0.0458

13. With the same values, find $\log_b 0.024$.

A) 1.6199
B) -2.3801
C) 0.3801
D) $\bar{2}.3801$

14. With the same values, find $\log_b 1.5$.

A) 0.7781
B) 0.1761
C) 1.1761
D) 0.4771

15. With the same values, find $\log_b 36$.

A) 1.5562
B) 0.7781
C) 1.4771
D) 3.0

16. With the same values, find $\log_b 0.25$.

A) -0.6020
B) 0.6020
C) $\bar{1}.3980$
D) $\bar{2}.3980$

17. With the same values, find $\log_b \sqrt{\dfrac{5}{2}}$.

A) 0.3980
B) 0.1990
C) 0.9950
D) 0.8495

18. The change of base law says $\log_a m =$

A) $\dfrac{\log_b a}{\log_b m}$
B) $\log_b m \cdot \log_b a$
C) $\dfrac{\log_b m}{\log_b a}$
D) $\log_b (m - a)$

19. Which of the following laws is correct?

A) $\log (m + n) = \log m + \log n$
B) $\log \dfrac{m}{n} = \dfrac{\log m}{\log n}$
C) $\log m^n = n \log m$
D) $\log (m - n) = \log m - \log n$

20. The value of $\log_b a \times \log_c b \times \log_a c$ is

A) 0
B) abc
C) 3
D) 1

Answer key

1-B 2-C 3-A 4-D 5-C 6-A 7-B 8-A 9-B 10-C

11-A 12-B 13-D 14-B 15-A 16-C 17-B 18-C 19-C 20-D