1. Question. Write $\log_7 = 1$ in exponential form.

   A. $\frac{7}{7} = 1$

   B. $7^0 = 1$

   C. $7 \cdot 1 = 7$

   D. $7^1 = 7$

   Go to answer 1

2. Question. Write $\log_{\frac{1}{2}} \frac{1}{8} = 3$ in exponential form.

   A. $\left(\frac{1}{2}\right)^3 = \frac{1}{8}$

   B. $\left(\frac{1}{8}\right)^{\frac{1}{3}} = \frac{1}{2}$

   C. $\left(\frac{1}{2}\right) \cdot \left(\frac{1}{2}\right) = \frac{1}{4}$

   D. $2^3 = 8$

   Go to answer 2

3. Question. Write $\log_6 \frac{1}{36} = -2$ in exponential form.

   A. $6^{-2} = \frac{1}{36}$

   B. $-2 = \frac{-36}{6}$

   C. $6^2 = 36$

   D. $\left(\frac{1}{6}\right) \cdot \left(\frac{1}{6}\right) = \frac{1}{36}$

   Go to answer 3

4. Question. Write $10^3 = 1000$ in logarithmic form.

A. $\log_{10} 1000 = 3$

B. $\log_3 1000 = 10$

C. $\log_{10} 3 = 1000$

D. $\log_3 10 = 1000$

Go to answer 4

5. Question. Write $4^{-2} = \frac{1}{16}$ in logarithmic form.

A. $\log_4 2 = 16$

B. $\log_2 4 = 16$

C. $\log_4 \frac{1}{16} = -2$

D. $\log_{16}(-2) = 4$

Go to answer 5

6. Question. Write $(1/2)^{-5} = 32$ in logarithmic form.

A. $\log_{\frac{1}{2}}(-5) = 32$

B. $\log_{\frac{1}{2}} 32 = -5$

C. $\log_{32}(-5) = \frac{1}{2}$

D. $\log_{-5} 32 = \frac{1}{2}$

Go to answer 6

7. Question. The graph of the logarithmic $y = \log_2(x+1)$ passes through which set of points?

A. $(0,0), (1,1), \left(-\frac{1}{2}, -1\right)$

B. $(0,1), (1,-1), \left(-\frac{1}{2}, 1\right)$

C. $(1, 0), (1, -1), (2, -2)$

D. $(-1, 0), (2, 1), (-\frac{1}{2}, -1)$

Go to answer 7

8. Question. Find the value of b, if any, that would cause the graph of $y = \log_b x$ to pass through the points $(1, 0)$ and $(\frac{1}{2}, 1)$.

A. $b = \frac{1}{2}$

B. $b = 2$

C. $b = 10$

D. No value of b

Go to answer 8

9. Question. Use a calculator to find the value of the variable when $\ln y = -0.28$. Express the answer to four decimal places.

A. $y = -0.28$

B. $y = 2.7128$

C. $y = -1.4695$

D. $y = 0.7558$

Go to answer 9

10. Question.

A.

B.

C.

D.

Go to answer 10

11. Question. Evaluate:

    A.

    B.

    C.

    D.

12. Question.

    A.

    B.

    C.

    D.

13. Question.

    A.

    B.

    C.

    D.

14. Question.

    A.

    B.

C.

D.

Go to answer 14

15. Question.

    A.

    B.

    C.

    D.

    Go to answer 15

16. Question.

    A.

    B.

    C.

    D.

    Go to answer 16

17. Question.

    A.

    B.

    C.

    D.

    Go to answer 17

18. Question.

    A.

    B.

    C.

    D.

    Go to answer 18

19. Question.

    A.

    B.

    C.

    D.

    Go to answer 19

20. Question.

    A.

    B.

    C.

    D.

    Go to answer 20

ANSWERS

1. Answer to Question 1 is "D".

   If $\log_b x = y$ then $b^y = x$.

   Go back 1

2. Answer to Question 2 is "A".

   Go back 2

3. Answer to Question 3 is "A".

   Go back 3

4. Answer to Question 4 is "A".

   Go back 4

5. Answer to Question 5 is "C".

   Go back 5

6. Answer to Question 6 is "B".

   Go back 6

7. Answer to Question 7 is "A".

   $y = \log_2(x + 1)$ can be re-written as $2^y = x + 1$ or $2^y - 1 = x$. If $y = 0$ then $2^0 - 1 = x$ or $x = 0$. If $y = 1$ and then $2^1 - 1 = x$ or $x = 1$. If $y = -1$ then $2^{-1} - 1 = x$ or $x = -\frac{1}{2}$.

   Go back 7

8. Answer to Question 8 is "A".

   Go back 8

9. Answer to Question 9 is "D".

   If $y = -0.28$ then $e^{-0.28} = y$. Thus, $y = 0.7558$.

   Go back 9

10. Answer to Question 10 is "".

    Go back 10

11. Answer to Question 11 is "".

    Go back 11

12. Answer to Question 12 is "".

    Go back 12

13. Answer to Question 13 is "B".

    Go back 13

14. Answer to Question 14 is "".

    Go back 14

15. Answer to Question 15 is "".

    Go back 15

16. Answer to Question 16 is "C".

    Go back 16

17. Answer to Question 17 is "".

    Go back 17

18. Answer to Question 18 is "".

    Go back 18

19. Answer to Question 19 is "".

    Go back 19

20. Answer to Question 20 is "".

    Go back 20