



Puzzle Time

Where Do Spies Do Their Shopping?

Write the letter of each answer in the box containing the exercise number.

Rewrite the equation in exponential form.

1. $\log_3 9 = 2$ 2. $\log_{25} 25 = 1$

3. $\log_2 32 = 5$ 4. $\log_{1/8} 8 = -1$

Rewrite the equation in logarithmic form.

5. $7^2 = 49$ 6. $3^{-1} = \frac{1}{3}$

7. $16^{3/4} = 8$ 8. $7^{-3} = \frac{1}{343}$

Evaluate the logarithm.

9. $\log_2 64$ 10. $\log_9 81$

11. $\log_8 2$ 12. $\log_3 \frac{1}{27}$

13. $\log_{1/2} 16$ 14. $\log_2 0.5$

15. $\log_{36} 6$ 16. $\log_4 64$

Answers

A. $3^2 = 9$

A. $2^5 = 32$

N. $\log_7 49 = 2$

O. $\log_{16} 8 = \frac{3}{4}$

S. $\left(\frac{1}{8}\right)^{-1} = 8$

R. -4

O. $\log_3 \frac{1}{3} = -1$

P. $\log_7 \frac{1}{343} = -3$

R. 2

T. $25^1 = 25$

T. 3 M. $\frac{1}{3}$

A. -3 K. -1

E. $\frac{1}{2}$ E. 6

1	2		3		4	5	6	7	8	9	10		11	12	13	14	15	16
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Puzzle Time

What Type Of Amphibian Loves To Tell Jokes?

Write the letter of each answer in the box containing the exercise number.

Match the expression with the logarithm that has the same value.

1. $\log_2 6 + \log_2 8$
2. $\log_3 10 - \log_3 5$
3. $4 \log_{1/2} 2$
4. $\log_2 2 - \log_2 3$
5. $\log_3 4 + \log_3 2$
6. $6 \log 8$

Condense the logarithmic expression.

7. $4 \log 2 - \log 5$
8. $\log 6 + \log 2 - \log 7$
9. $\frac{1}{2} \log 4 + \log 3$
10. $3 \log 2 - 2 \log 2$
11. $1 - \log 4$
12. $\ln 3 + 4 \ln x - \ln y$

Answers

- I. $\log_{1/2} 16$
- A. $\log_2 48$
- M. $\log \frac{16}{5}$
- Y. $\log(8^6)$
- E. $\log \frac{5}{2}$
- S. $\log_3 2$
- N. $\log 6$
- L. $\log_2 \frac{2}{3}$
- L. $\log_3 8$
- A. $\log \frac{12}{7}$
- D. $\log 2$
- R. $\ln \frac{3x^4}{y}$

1		2	3	4	5	6	7	8	9	10	11	12
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