



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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