point

The goal of this assignment is to practice with logarithms that appear frequently in the analysis of algorithms.

Recall that $\log_a n$ is the power to which you need to raise a in order to obtain n.

The main rules for working with logarithms are the following:

- 1. $\log_a(n^k) = k \log_a n$
- 2. $\log_a(nm) = \log_a n + \log_a m$
- 3. $n^{\log_a b} = b^{\log_a n}$
- $4.\log_a n \cdot \log_b a = \log_b n$

Is it true that $(\log_5 n)^2 = 2\log_5 n$?



Yes



No

Correct

 $(\log_5 n)^2$ is just $(\log_5 n)(\log_5 n)$



 $2. \quad \log_2 n \cdot \log_3 2 = \log_3 n$

1/1 point Yes

Correct





point

3. $n^{\log_2 n} = n$



Yes

No



Correct



 $4. \quad \log_3(2n) = \log_3 2 \cdot \log_3 n$

point

Yes



No

Correct



5. $\log_{10}(n^2) = 2\log_{10}n$

1/1 point Yes

Correct

No



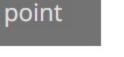


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6. $n^{\log_7 3} = 7^{\log_3 n}$



Yes



No

 $n^{\log_7 3} = 3^{\log_7 n}$