✓ **Congratulations! You passed!**
TO PASS 60% or higher

Keep Learning

GRADE
100%

Logarithms

TOTAL POINTS 6

1. Introduction and Learning Outcomes   1 / 1 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. $\log_a\left(n^k\right) = k \log_a n$
   2. $\log_a\left(nm\right) = \log_a n + \log_a m$
   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. $\log_2 n \cdot \log_3 2 = \log_3 n$ 1 / 1 point

◉ Yes

○ No

✓ **Correct**

3. $n^{\log_2 n} = n$ 1 / 1 point

○ Yes

◉ No

✓ **Correct**

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

○ Yes

◉ No

✓ Correct

1 / 1 point

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

◉ Yes

○ No

✓ Correct

1 / 1 point

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

○ Yes

◉ No

✓ Correct

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

1 / 1 point