

Twinning – Partner A

Directions: Complete each of the problems below. As you finish each problem, compare your final answer with that of your partner. Although you have different problems, your answers should match! If they do not, work together to find the mistake. No calculators!

1. If $\log_5 k^4 = A \log_5 k$, find the value of A .

2. Evaluate $\frac{\ln e^3}{\ln e^2}$.

3. Simply into a single value.

$$\log_2 64 - \log_2 8$$

4. Condense the expression to a single logarithm.

$$3 \log 4 - 5 \log 2$$

5. If $\log \frac{x^4 y^2}{xy^5} = A \log x + B \log y$, find the value of B .

6. If $5 \log_2 39 + 3 \log_2 39 - \log_2 39^2 = \log_2 39^A$, find the value of A .

7. If $\ln m + \ln \sqrt{m} + \ln \frac{1}{m} = k \ln m$, find the value of k .

8. If $2(\ln 4x - \ln y) - (\ln 16 - 2 \ln 8) = \ln A \left(\frac{x}{y}\right)^2$, find the value of A .

Twinning – Partner B

Directions: Complete each of the problems below. As you finish each problem, compare your final answer with that of your partner. Although you have different problems, your answers should match! If they do not, work together to find the mistake. No calculators!

1. If $\log_7 m + \log_7 m^3 = \log_7 m^X$, find the value of X.

2. Evaluate $\log_4 \frac{4^2}{\sqrt{4}}$.

3. Simplify into a single value.

$$\log_3 27 + \log_3 1$$

4. Condense the expression to a single logarithm.

$$5 \log 2 - 2 \log 4$$

5. If $\ln \frac{m^3 p^4 z}{m^7 z^4} = A \ln m + B \ln p + C \ln z$, find $A + B + C$.

6. If $\log_5 20 + 3 \log_5 20 + \log_5 400 = \log_5 20^k$, find the value of k .

7. If $3 \log p^{\frac{1}{2}} - \log p^2 - \log \frac{1}{p} = A \log p$, find the value of A .

8. If $3 (\ln x - \ln 2y) + (6 \ln 4 - 3 \ln 2) = \ln B \left(\frac{x}{y} \right)^3$, find the value of B .