Activity 6.2: Exp & Log Equations and Graphs

A

Name: _____ Partner's name: _____ Date: _____

Directions: Round decimal answers to the nearest hundredth. Problems 6 and 8 use graphs. Graphs are drawn accurately.

Work alone, then compare after each problem. If answers differ, find the mistake together.

1

Solve $5^x = 20$.

Answer: _____ Match? ☐ Yes ☐ No

2

Write $2\log x + \log y$ as a single logarithm.

Answer: _____ Match? ☐ Yes ☐ No

3

A 80-gram sample halves every 5 days. How many grams remain after 15 days?

Answer: _____ Match? ☐ Yes ☐ No

4

Solve $\ln x = 3$. Give an exact answer.

Answer: _____ Match? ☐ Yes ☐ No

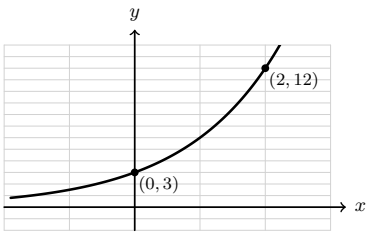
5

Solve $\log_2 x + \log_2(x-2) = 3$.

Answer: _____ Match? ☐ Yes ☐ No

6

Write the exponential function $y = a \cdot b^x$ shown.



Answer: _____ Match? ☐ Yes ☐ No

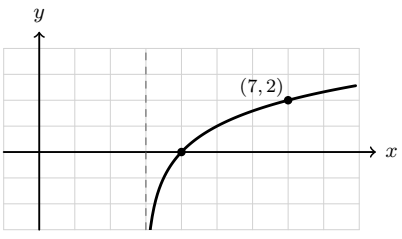
7

Find the horizontal asymptote of $y = 2^x - 3$.

Answer: _____ Match? ☐ Yes ☐ No

8

Find the x-intercept of the graph of $y = \log_2(x-3)$.



Answer: _____ Match? ☐ Yes ☐ No

Activity 6.2: Exp & Log Equations and Graphs

B

Name: _____ Partner's name: _____ Date: _____

Directions: Round decimal answers to the nearest hundredth. Problems 6 and 8 use graphs. Graphs are drawn accurately.

Work alone, then compare after each problem. If answers differ, find the mistake together.

1

Solve $3 \cdot 5^x = 60$.

Answer: _____ Match? ☐ Yes ☐ No

2

Write $\log x + \log(xy)$ as a single logarithm.

Answer: _____ Match? ☐ Yes ☐ No

3

A 40-gram sample halves every 3 days. How many grams remain after 6 days?

Answer: _____ Match? ☐ Yes ☐ No

4

Solve $2\ln x = 6$. Give an exact answer.

Answer: _____ Match? ☐ Yes ☐ No

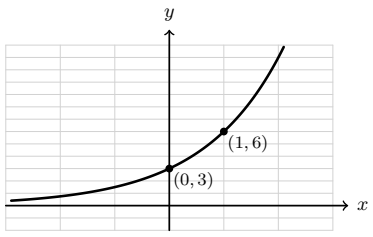
5

Solve $\log_2(x-2) = 3 - \log_2 x$.

Answer: _____ Match? ☐ Yes ☐ No

6

Write the exponential function $y = a \cdot b^x$ shown.



Answer: _____ Match? ☐ Yes ☐ No

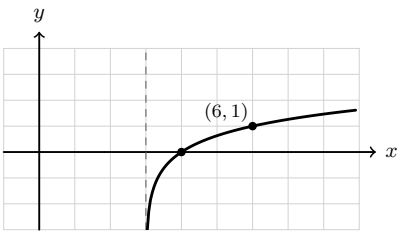
7

Find the horizontal asymptote of $y = 3^{x+1} - 3$.

Answer: _____ Match? ☐ Yes ☐ No

8

Find the x-intercept of the graph of $y = \log_3(x-3)$.



Answer: _____ Match? ☐ Yes ☐ No