

Exponential and Logarithmic Equations



Black Out Logarithms

Partner #2: Tim

13. $\log_3 x = -2$
 $3^{-2} = x$
 $x = 1/9$

14. $\log x + \log(x-9) = 1$
 $\log(x^2 - 9x) = 1$
 $x^2 - 9x = 10$
 $x^2 - 9x - 10 = 0$
 $(x-10)(x+1) = 0$
 $x \neq -1$
 $x = 10$

15. $\log_9 x = \frac{1}{3}$

17. $\log x - \log(x+3) = -1$
 $\log \frac{x}{x+3} = -1$
 $\frac{x}{x+3} = \frac{1}{10}$
 $10x = x+3$
 $9x = 3$
 $x = \frac{1}{3}$

Partner #: Sara

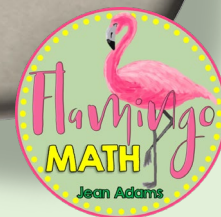
Black Out

Student Partner #1: _____ Student Partner #2: _____

Directions: Each partner will work their set of 12 questions on the student handout. Locate your answer on the grid below, record your problem number in the circle and color the block with your choice of colored pencil.

10	3	$\frac{7}{2}$	9	27
1	64	2	$\frac{1}{e^2}$	$\frac{1}{6}$

Partner Activity



Logarithmic Equations Partner Activity



Here is a FREE focused **Black-Out Partner Practice** to help Algebra 2 students review key concepts related to **solving exponential and logarithmic equations**. There are 24 questions in the activity, so each student has a unique set of 12 problems. When the problem is simplified completely, the student will locate their answer on the **Black Out Sheet** where they will record the number of their solution and then color the block in their specific color choice. When the activity is complete, all answers will be shaded and the answer sheet will Black Out.

Students should work on their individual worksheet, without the aid of a graphing calculator.

I appreciate your comments, suggestions, and ideas.

[Please visit my store](#) for more
engaging activities.



Black Out

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10 	3 	$\frac{7}{2}$ 	9 	27
$\frac{1}{3}$ 	64 	2 	$\frac{1}{e^2}$ 	$\frac{1}{6}$
$2e$ 	1 	Black Out	-1 	5
4 	8 	$\frac{8}{3}$ 	$\frac{5}{2}$ 	$\frac{e^6}{3}$
$\frac{1}{9}$ 	$\frac{3}{2}$ 	$\frac{9}{2}$ 	7 	$\frac{e}{8}$

Black Out Logarithms

Partner #: _____

1. $\log_4 x = 3$	2. $\log x - \log(x + 3) = -1$
3. $\log_9 x = \frac{1}{2}$	4. $5^{4x-7} = 125$
5. $\ln x = -2$	6. $9^x = 27$
7. $\log_{81} x = \frac{3}{4}$	8. $\ln 3x - \ln 6 = 1$
9. $4^{3x-1} = 8^{x+2}$	10. $\ln 4x + \ln 2 = 1$
11. $\log 4x + \log x = 2$	12. $\log_2(x^2 - 7) = \log_2 6x$