Name : _____ Score : _____

Teacher : _____ Date : _____

Inverse of Logarithms

Find each function's inverse.

1) $y = \log_8 x^5$

2) $y = \log_4 8x$

3) $y = \log_9 -3x$

4) $y = 4\log -7x$

5) $y = \log_6 \left(3x^5 - 4 \right)$

6) $y = \log -6x$

7) $y = \log_3 \left(-2x + 5 \right)$

8) $y = \log_5 x^2$

9) $y = \log_7 x^2$

10) $y = -7\log_2 -9x$

11) $y = \log_5 \left(7x + 8 \right)$

12) $y = \log_7 5x^5$

13) $y = -6\log_8 -7x$

14) $y = \log_9 \left(3x + 7 \right)$

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Inverse of Logarithms

Find each function's inverse.

1) $y = \log_8 x^5$

$y = 8^{\frac{x}{5}}$

2) $y = \log_4 8x$

$y = \frac{4^x}{8}$

3) $y = \log_9 -3x$

$y = \frac{9^x}{-3}$

4) $y = 4\log -7x$

$y = \frac{10^{\frac{x}{4}}}{-7}$

5) $y = \log_6 \left(3x^5 - 4 \right)$

$y = \left(\frac{6^x+4}{3} \right)^{\frac{1}{5}}$

6) $y = \log -6x$

$y = \frac{10^x}{-6}$

7) $y = \log_3 \left(-2x + 5 \right)$

$y = \frac{3^x-5}{-2}$

8) $y = \log_5 x^2$

$y = 5^{\frac{x}{2}}$

9) $y = \log_7 x^2$

$y = 7^{\frac{x}{2}}$

10) $y = -7\log_2 -9x$

$y = \frac{2^{\frac{x}{-7}}}{-9}$

11) $y = \log_5 \left(7x + 8 \right)$

$y = \frac{5^x-8}{7}$

12) $y = \log_7 5x^5$

$y = \left(\frac{7^x}{5} \right)^{\frac{1}{5}}$

13) $y = -6\log_8 -7x$

$y = \frac{8^{\frac{x}{-6}}}{-7}$

14) $y = \log_9 \left(3x + 7 \right)$

$y = \frac{9^x-7}{3}$