Algebra 2 Name_____

Inverse of Log and Exponential Functions

Date_____ Block____

Find the inverse of each function.

1) $y = \log_2 (x + 1)$

2) $y = \log_5 x + 2$

3) $y = \log_3 x^4$

4) $y = \log_3 x^2$

5) $y = \log_2 (-3x)$

6) $y = -5 \log_4 (-4x)$

7) $y = \log_4 (4^x - 3)$

8) $y = \log_5 (x + 2) - 1$

9) $y = \log_5 (x^3 - 6)$

10) $y = -5 \log_2 x + 7$

11) $y = 6^{\frac{x}{3}}$

12) $y = 4^x + 1$

13) $y = -\dfrac{6^x}{2}$

14) $y = 6^x - 3$

15) $y = 3^x + 9$

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

17) $y = \dfrac{\left(\frac{1}{3}\right)^x - 7}{-2}$

18) $y = \left(\dfrac{6^x}{2}\right)^{\frac{1}{4}}$

19) $y = \left(\dfrac{3^x}{4}\right)^{\frac{1}{3}}$

20) $y = \dfrac{6^x + 6}{-4}$

Answers to Inverse of Log and Exponential Functions

1) $y = 2^x - 1$

2) $y = 5^{x-2}$

3) $y = 3^{\frac{x}{4}}$

4) $y = 3^{\frac{x}{2}}$

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

6) $y = \dfrac{4^{-\frac{x}{5}}}{-4}$

7) $y = \log_4 \left(4^x + 3\right)$

8) $y = 5^{x+1} - 2$

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

10) $y = 2^{\frac{-x+7}{5}}$

11) $y = \log_6 x^3$

12) $y = \log_4 \left(x - 1\right)$

13) $y = \log_6 -2x$

14) $y = \log_6 \left(x + 3\right)$

15) $y = \log_3 \left(x - 9\right)$

16) $y = \log_3 \left(x^4 - 5\right)$

17) $y = \log_{\frac{1}{3}} \left(-2x + 7\right)$

18) $y = \log_6 2x^4$

19) $y = \log_3 4x^3$

20) $y = \log_6 \left(-4x - 6\right)$