

Unit 7.1 Equation to Logarithmic Form PRACTICE

Period _____

Rewrite each equation in logarithmic form.

1) $b^a = 88$

$$\log_b 88 = a$$

2) $13^{\frac{4}{3}} = b$

$$\log_{13} b = \frac{4}{3}$$

3) $y^{-18} = x$

$$\log_y x = -18$$

4) $x^{11} = y$

$$\log_x y = 11$$

5) $16^y = x$

$$\log_{16} x = y$$

6) $v^u = 82$

$$\log_v 82 = u$$

7) $v^{-11} = 98$

$$\log_v 98 = -11$$

8) $x^y = 110$

$$\log_x 110 = y$$

9) $14^2 = 196$

$$\log_{14} 196 = 2$$

10) $125^{\frac{1}{3}} = 5$

$$\log_{125} 5 = \frac{1}{3}$$

11) $225^{\frac{1}{2}} = 15$

$$\log_{225} 15 = \frac{1}{2}$$

12) $18^2 = 324$

$$\log_{18} 324 = 2$$

13) $13^{-2} = \frac{1}{169}$

$$\log_{13} \frac{1}{169} = -2$$

14) $7^3 = 343$

$$\log_7 343 = 3$$

15) $4^3 = 64$

$$\log_4 64 = 3$$

16) $169^{\frac{1}{2}} = 13$

$$\log_{169} 13 = \frac{1}{2}$$

Rewrite each equation in exponential form.

17) $\log_x y = -1$

$$x^{-1} = y$$

18) $\log_y x = -11$

$$y^{-11} = x$$

19) $\log_v u = 3$

$$v^3 = u$$

20) $\log_{19} n = 12$

$$19^{12} = n$$

21) $\log_y x = 6$

$$y^6 = x$$

22) $\log_y x = 11$

$$y^{11} = x$$

23) $\log_u 124 = v$

$$u^v = 124$$

24) $\log_x y = \frac{21}{20}$

$$x^{\frac{21}{20}} = y$$

25) $\log_6 216 = 3$

$$6^3 = 216$$

26) $\log_{19} 1 = 0$

$$19^0 = 1$$

27) $\log_{19} 361 = 2$

$$19^2 = 361$$

28) $\log_{144} 12 = \frac{1}{2}$

$$144^{\frac{1}{2}} = 12$$

29) $\log_{11} \frac{1}{121} = -2$

$$11^{-2} = \frac{1}{121}$$

30) $\log_4 16 = 2$

$$4^2 = 16$$

31) $\log_3 9 = 2$

$$3^2 = 9$$

32) $\log_5 125 = 3$

$$5^3 = 125$$