

NAME: _____

P.I. A2.A.28: Solve a logarithmic equation by rewriting as an exponential equation

Solve:

1. $\log_4 (x-2) = 1$

2. $\log_8 (x-3) = 1$

3. $\log_5 (x+3) = 1$

4. $\log_3 (x-8) = 3$

5. $\log_7 (x+6) = 2$

6. $\log_2 (x-4) = -3$

[A] $\frac{33}{8}$ [B] 2 [C] 13 [D] $-\frac{31}{8}$

7. $\log_5 (x-2) = -1$

[A] $\frac{11}{5}$ [B] 1 [C] $-\frac{9}{5}$ [D] 5

8. $\log_2 (x+8) = -3$

[A] 1 [B] $\frac{65}{8}$ [C] $\frac{1}{2048}$ [D] $-\frac{63}{8}$

9. $\log_4 (x+1) = -2$

[A] $-\frac{15}{16}$ [B] 15 [C] $\frac{17}{16}$ [D] $\frac{1}{64}$

10. Which is the solution of $\log x + \log 4 = 2$?

[A] $\frac{1}{2}$ [B] -2 [C] 2.5 [D] 25