

**Logarithmic Equation**

DS1

**Solve for x.**

1)  $\log_4 (x+3) + \log_4 (x+3) = \log_4 49$

x = 

2)  $\log_7 \left( \frac{x-3}{6} \right) = \log_7 \left( \frac{3}{x-10} \right)$

x = 

3)  $2 \log_3 (x-4) = \log_3 4$

x = 

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5)  $\log_2 (x-5) + \log_2 (x-)$

x = 

7)  $1 = \log_4 \left( \frac{x+20}{x+8} \right)$

x = 

8)  $\log_5 (x+1) + \log_5 (x-1) = \log_5 3$

x =

## Logarithmic Equation

DS1

Solve for x.

1)  $\log_4(x+3) + \log_4(x+3) = \log_4 49$

x = **4**

2)  $\log_7\left(\frac{x-3}{6}\right) = \log_7\left(\frac{3}{x-10}\right)$

x = **12**

3)  $2 \log_3(x-4) = \log_3 4$

x = **6**

5)  $\log_2(x-5) + \log_2(x-5) = \log_2 12$

x = **12**

7)  $1 = \log_4\left(\frac{x+20}{x+8}\right)$

x = **-4**

8)  $\log_5(x+1) + \log_5(x-1) = \log_5 3$

x = **2**

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