

**Logarithmic Equation**

DS3

**Solve for x.**

1)  $\log_5 (x+3) + \log_5 (x-2) = 2 \log_5 x$

x = 

2)  $\log_2 (x+1) + \log_2 (x-1) = \log_2 24$

x = 

3)  $2 \log_8 x = \log_8 (13x)$

x = 

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5)  $2 \log_3 (x-6) = \log_3 4$

x = 

7)  $\log_6 (x+3) + \log_6 (x-4) = \log_6 8$

x = 

8)  $2 \log_3 x = \log_3 (3x-2)$

x =

**Logarithmic Equation**

DS3

**Solve for x.**

1)  $\log_5 (x+3) + \log_5 (x-2) = 2 \log_5 x$

x = **6**

2)  $\log_2 (x+1) + \log_2 (x-1) = \log_2 24$

x = **5**

3)  $2 \log_8 x = \log_8 (13x)$

x = **1, 12**

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5)  $2 \log_3 (x-6) = \log_3 4$

x = **8**

7)  $\log_6 (x+3) + \log_6 (x-4) = \log_6 8$

x = **5**

8)  $2 \log_3 x = \log_3 (3x-2)$

x = **1, 2**