

**Logarithmic Equation**

ES3

Solve each logarithmic equation.

1)  $\log_2 (x+4) = 2 \log_2 8$

x = 

2)  $\log_4 (4x-2) = \log_4 (2x+34)$

x = 

3)  $\log_6 5x = \log_6 75$

x = 

4)  $\log_5 (7x+3) = \log_5 (8x+32)$

5)  $2 \log_3 4 = \log_3 (x-1)$

x = 

7)  $\log_3 (3-2x) = 2 \log_3 (x+56)$

x = 

9)  $\log_5 74 = \log_5 (x-1) + \log_5 (3x+37)$

x = 

11)  $\log_7 (x+13) = \log_7 (2x+3)$

x = 

12)  $\log_6 (3x+12) = \log_6 3$

x = 

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**Logarithmic Equation**

ES3

Solve each logarithmic equation.

1)  $\log_2 (x+4) = 2 \log_2 8$

x = **60**

2)  $\log_4 (4x-2) = \log_4 (2x+34)$

x = **18**

3)  $\log_6 5x = \log_6 75$

x = **15**

4)  $\log_5 (7x+3) = \log_5 (8x+32)$

5)  $2 \log_3 4 = \log_3 (x-1)$

x = **-4**

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

x = **-39**

9)  $\log_5 74 = \log_5 (x-1)$

x = **68**

11)  $\log_7 (x+13) = \log_7 (2x+3)$

x = **10**

12)  $\log_6 (3x+12) = \log_6 3$

x = **-3**

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