

# Solving Multi-Step Equations

With Parentheses Multiplication - Negative Coefficients

Name: \_\_\_\_\_ Date: \_\_\_\_\_



Solve the equations.

(1)  $100 = 5(-4x - 8)$

(2)  $-7(-7x - 8) = 399$

(3)  $-350 = 5(8x - 6)$

(4)  $176 = 4(-5x + 9)$

(5)  $-312 = 8(4x - 7)$

(6)  $8(-8x + 10) = -176$

(7)  $7(5x + 10) = 350$

(8)  $440 = 8(-6x - 5)$

(9)  $-6(-4x - 12) = -168$

(10)  $-308 = -7(-5x + 4)$

(11)  $8(5x + 4) = -168$

(12)  $92 = 4(-6x - 13)$

(13)  $-4(6x - 3) = -204$

(14)  $5(-4x + 5) = 225$

(15)  $-4(8x - 6) = 280$

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## ANSWER KEY



Solve the equations.

$$\begin{aligned} (1) \quad 100 &= 5(-4x - 8) \\ 20 &= -4x - 8 \\ 28 &= -4x \\ -7 &= x \end{aligned}$$

$$\begin{aligned} (2) \quad -7(-7x - 8) &= 399 \\ -7x - 8 &= -57 \\ -7x &= -49 \\ x &= 7 \end{aligned}$$

$$\begin{aligned} (3) \quad -350 &= 5(8x - 6) \\ -70 &= 8x - 6 \\ -64 &= 8x \\ -8 &= x \end{aligned}$$

$$\begin{aligned} (4) \quad 176 &= 4(-5x + 9) \\ 44 &= -5x + 9 \\ 35 &= -5x \\ -7 &= x \end{aligned}$$

$$\begin{aligned} (5) \quad -312 &= 8(4x - 7) \\ -39 &= 4x - 7 \\ -32 &= 4x \\ -8 &= x \end{aligned}$$

$$\begin{aligned} (6) \quad 8(-8x + 10) &= -176 \\ -8x + 10 &= -22 \\ -8x &= -32 \\ x &= 4 \end{aligned}$$

$$\begin{aligned} (7) \quad 7(5x + 10) &= 350 \\ 5x + 10 &= 50 \\ 5x &= 40 \\ x &= 8 \end{aligned}$$

$$\begin{aligned} (8) \quad 440 &= 8(-6x - 5) \\ 55 &= -6x - 5 \\ 60 &= -6x \\ -10 &= x \end{aligned}$$

$$\begin{aligned} (9) \quad -6(-4x - 12) &= -168 \\ -4x - 12 &= 28 \\ -4x &= 40 \\ x &= -10 \end{aligned}$$

$$\begin{aligned} (10) \quad -308 &= -7(-5x + 4) \\ 44 &= -5x + 4 \\ 40 &= -5x \\ -8 &= x \end{aligned}$$

$$\begin{aligned} (11) \quad 8(5x + 4) &= -168 \\ 5x + 4 &= -21 \\ 5x &= -25 \\ x &= -5 \end{aligned}$$

$$\begin{aligned} (12) \quad 92 &= 4(-6x - 13) \\ 23 &= -6x - 13 \\ 36 &= -6x \\ -6 &= x \end{aligned}$$

$$\begin{aligned} (13) \quad -4(6x - 3) &= -204 \\ 6x - 3 &= 51 \\ 6x &= 54 \\ x &= 9 \end{aligned}$$

$$\begin{aligned} (14) \quad 5(-4x + 5) &= 225 \\ -4x + 5 &= 45 \\ -4x &= 40 \\ x &= -10 \end{aligned}$$

$$\begin{aligned} (15) \quad -4(8x - 6) &= 280 \\ 8x - 6 &= -70 \\ 8x &= -64 \\ x &= -8 \end{aligned}$$