

Equation

Unit 8.1

Solving Equations with Parentheses Part I

1. Solve for x.

$$\text{Example: } 5(x - 4) = -2(3x - 1)$$

$$\text{or, } 5x - 20 = -6x + 2$$

$$\text{or, } 5x + 6x = 2 + 20$$

$$\text{or, } 11x = 22$$

$$\therefore x = \frac{22}{11} = 2$$

Note: We remove parentheses first.

a. $4(2x - 3) = -2$

f. $-6(3 - x) = 15$

b. $3(x + 5) = 12$

g. $7x + (x + 2) = 14$

c. $-4(x + 2) = 7(x - 2)$

h. $7x - (x + 2) = 14$

d. $-3(2x + 7) = 4(-3x - 5)$

i. $7x + (x - 2) = 14$

e. $5(5x - 2) = -6$

j. $7x - (x - 2) = 14$

2. Solve for x.

a. $4x - 3(3x - 6) = 8$

e. $x - (5 - 3x) = 6(x - 1)$

b. $4x + 5(2x + 1) = -1$

f. $9x - (4x - 12) = 8$

c. $3(2x - 3) = 4x - 1$

g. $4x - 3(2x + 7) = 4(-2x - 7)$

d. $7x - 3(x - 4) = 10$

h. $7(x - 1) + 15(x - 2) = 5(2x - 6)$