

Accuplacer Study Modules

TOPIC: Solving Linear Equations

Instructions: Solve each equation

1.  $5(x+3) - 7x = -3$  (Distribute 5)

$$\underline{5x + 15 - 7x = -3}$$
 (Combine like terms)
 
$$\underline{-2x + 15 = -3}$$
 (get rid of +)
 
$$\underline{-15 \quad -15}$$

$$\underline{-2x = -18}$$
 (get rid of multiplication)
 
$$\underline{-2 \quad -2}$$

$$\boxed{x = 9}$$
 Solution

2.  $4x + 7 - 10x = -8x + 15$  (Combine like terms)

$$\underline{-6x + 7 = -8x + 15}$$
 (Get all variables to one side)
 
$$\underline{+8x \quad +8x}$$

$$\underline{2x + 7 = 15}$$
 (Get rid of addition)
 
$$\underline{-7 \quad -7}$$

$$\underline{2x = 8}$$
 (Get rid of multiplication)
 
$$\underline{2 \quad 2}$$

$$\boxed{x = 4}$$
 Solution

3.  $2(x-6) = 5(2x+4)$  (Distribute 2 and 5)

$$\underline{2x - 12 = 10x + 20}$$
 (Get all variables on one side)
 
$$\underline{-10x \quad -10x}$$

$$\underline{-8x - 12 = 20}$$
 (Get rid of subtraction)
 
$$\underline{+12 \quad +12}$$

$$\underline{-8x = 32}$$
 (Get rid of multiplication)
 
$$\underline{-8 \quad -8}$$

$$\boxed{x = -4}$$
 Solution

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

$$\underline{5 - 2x - 6 = 4x + 2x - 14}$$
 (Combine like terms)
 
$$\underline{-2x - 1 = 6x - 14}$$
 (Get all variables on one side)
 
$$\underline{-6x \quad -6x}$$

$$\underline{-8x - 1 = -14}$$
 (Get rid of subtraction)
 
$$\underline{+1 \quad +1}$$

$$\underline{-8x = -13}$$
 (Get rid of multiplication)
 
$$\underline{-8 \quad -8}$$

$$\boxed{x = \frac{13}{8}}$$
 Solution