

## Indicators

### Objective:

**5.03 Use and evaluate algebraic expressions, linear equations or inequalities to solve problems.**

Vocabulary and Resources		
variable	equivalent expressions	less than or equal to $\leq$
additive inverse	order of operations	greater than or equal to $\geq$
multiplicative inverse	less than $<$	compound inequality
distributive property	greater than $>$	$a < x < b$

- A.** In convex pentagon  $ABCDE$ ,  
 $m\angle A = 6x^\circ$ ,  
 $m\angle B = (4x + 13)^\circ$ ,  
 $m\angle C = (x + 9)^\circ$ ,  
 $m\angle D = (2x - 8)^\circ$ , and  
 $m\angle E = (4x - 1)^\circ$ .

What are the degree measures of each of the angles?

- B.** A quadrilateral,  $LMNO$ , has two congruent angles, a third angle that measures  $44^\circ$  and the fourth angle that measures  $120^\circ$ . Write and solve an equation that can be used to find the measures of the missing angles.

- C.** The formula for the area of a trapezoid is  $A = 0.5h(b_1 + b_2)$ . If  $b_1 + b_2 = 25$  cm, and the area is  $25$  cm<sup>2</sup>, find the value of  $h$ .

- D.** Amin, Bobbi, and Carl shared some peanuts in the ratio of 2:3:5. If Bobbi had 36 peanuts, write an equation to determine how many peanuts were shared. How many peanuts did each boy get?

**E.** A set of coins has a value \$2.75. There are twice as many dimes as nickels, no pennies and four quarters. Write an equation to determine how many coins there are in all. How many are there?

**F.** The area of a rectangular garden plot is 56 square yards. If the length of the garden is seven yards, write an equation to determine how many feet of fencing will be needed to enclose the garden. How many feet of fencing are needed?

**G.** Three-fifths of the books on a shelf are mystery stories. The rest of the books are science fiction. If 68 books are science fiction, write an equation to determine how many books are on the shelf. How many books are mystery stories?

**H.** If the perimeter of the triangle below is 63 centimeters, what are the lengths of the sides of the triangle?

