

Answer on Question #60482 – Math – Geometry

Question

If measure angle 1 equals $3x + 15$ and measure angle 2 equals $6x + 3$ find x

Solution

Case 1. Angles 1, 2 are equal in measure.

Given measure of each angle is the same, we obtain the following equation:

$$3x + 15 = 6x + 3$$

$$12 = 3x$$

$$x = 4 \text{ (degrees).}$$

Case 2. Angles 1, 2 add up to 180 degrees.

Two supplementary angles have the sum of 180 degrees.

If angle 1 equals $(3x+15)$ and angle 2 equals $(6x+3)$, then we obtain the following equation:

$$(3x + 15) + (6x + 3) = 180$$

$$9x + 18 = 180$$

$$9x = 162$$

$$x = 18 \text{ (degrees).}$$

Answer: 4° or 18° .