Answer on Question #62303 – Math – Algebra

Question

A 40-in. board is to be cut into two pieces so that one piece is 8 inches shorter than the other. Find the length of each piece.

Solution

Let x inches be the length of the shorter piece. Then the length of the other piece is $(x + 8)$ inches. Together they are $(x + x + 8)$ inches, therefore,

$$x + x + 8 = 40;$$
$$2x = 40 - 8;$$
$$2x = 32.$$

Divide both sides by 2:

$$x = \frac{32}{2};$$
$$x = 16.$$

The length of the shorter piece is 16 inches.
The length of the longer piece is 16 + 8 = 24 inches.

Answer: 16 inches; 24 inches.