Example 12.
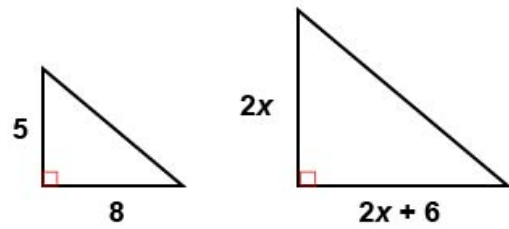The two triangles are similar. Find the
lengths of the two sides.

Solution.
Set up a proportion and solve
the equation for x.

$$\frac{a}{b} = \frac{c}{d}$$

$$\frac{5}{8} = \frac{2x}{2x+6}$$

$$5(2x+6) = 16x$$

$$10x + 30 = 16x$$

$$-6x = -30$$

$$x = 5$$

$$2x = 2 \cdot 5$$
$$= 10$$

$$2x + 6 = 2 \cdot 5 + 6$$
$$= 16$$