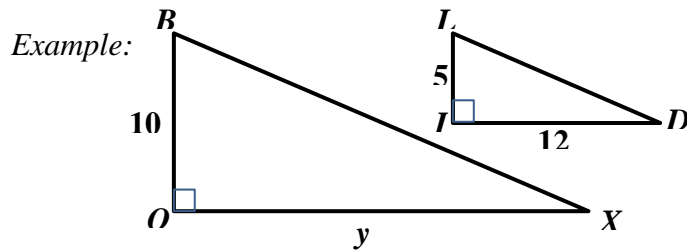




### Similar Triangles

Figures that have the same shape but not necessarily the same size are *similar* figures. The symbol  $\sim$  means *is similar to*. If two triangles are similar, then their corresponding sides are proportional.



- (a)  $\triangle BOX \sim \triangle LID$ . Find the value of  $y$ , using proportions. (b) Let  $m\overline{LD} = 13$ . Find the measure of  $\overline{BX}$ .

$$\frac{m\overline{BO}}{m\overline{LI}} = \frac{m\overline{OX}}{m\overline{ID}} \quad \text{Corresponding sides are proportional.}$$

$$\frac{10}{5} = \frac{y}{12}$$

$$10(12) = 5y \quad \text{Solve, using cross products.}$$

$$120 = 5y$$

$$24 = y$$

$$\frac{m\overline{BO}}{m\overline{LI}} = \frac{m\overline{BX}}{m\overline{LD}}$$

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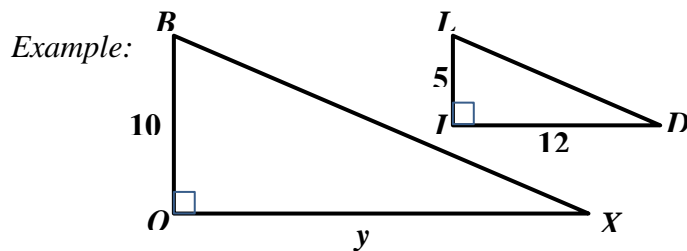
$$130 = 5(m\overline{BX})$$

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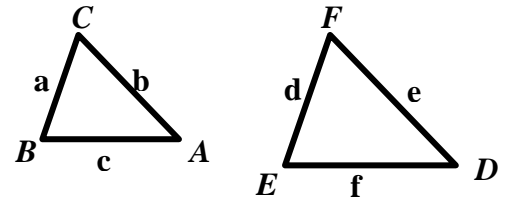
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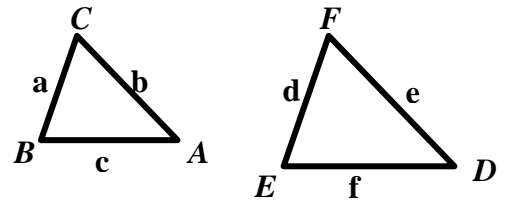
2. Find  $c$  if  $f = 9$ ,  $b = 8$ , and  $e = 12$ .

3. Find  $d$  if  $a = 6$ ,  $f = 7$ , and  $c = 5$ .

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