

Given above is a right triangle named $\triangle TEH$. Assume that \overline{EB} is the altitude to the hypotenuse \overline{TH} . Complete the table below.

Triangle	Right Angles	Hypotenuse	Acute Angles	Shorter Leg	Longer Leg
$\triangle TEH$	$\angle TEH$	\overline{TH}			
$\triangle EBT$					
$\triangle EBH$					

Using the rule of similarity on right triangles, complete the following ratios below represented by their line segments.

$$\triangle TEH \sim \triangle EBT \rightarrow \frac{\overline{EB}}{\overline{BT}} = ?$$

$$\triangle TEH \sim \triangle EBH \rightarrow \frac{\overline{EH}}{\overline{TH}} = ?$$

$$\triangle EBH \sim \triangle EBT \rightarrow \frac{\overline{TH}}{\overline{ET}} = ?$$

Answer the following questions to satisfy the conditions of the similarity on right triangles.

1. If $c = 3$ and $n = 12$, find b .
2. If $c = 6$ and $n = 18$, find y .
3. If $n = 8$ and $c = 6$, find a .