GEOMETRY · CLASSWORK · ADVANCED

Use the Geometric Mean to Solve Problems

SCORE / 25

01 Part A · Practice

Altitude = $\sqrt{(\text{piece}_1 \cdot \text{piece}_2)}$; leg = $\sqrt{(\text{adjacent piece} \cdot \text{hypotenuse})}$. Find the easy length first, then the rest.

EXAMPLE

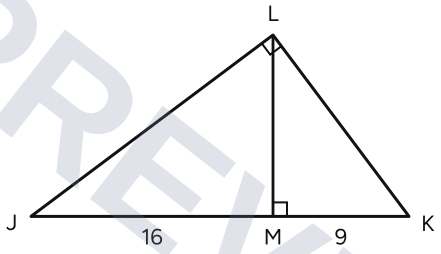
Pieces 3 **and** 12**. Find altitude** *x* **and leg** *y* **next to** 3**.**

1. $x = \sqrt{3 \cdot 12} = 6$.
2. Hypotenuse = 15.
3. $y = \sqrt{3 \cdot 15} = \sqrt{45} = 3\sqrt{5}$.

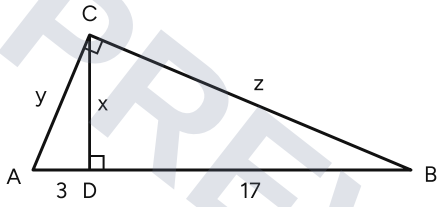
1 ●○○ Altitude $RS = 10$, $PS = 20$. Find SQ, then leg QR. Simplest radical form.

2 ●○○ The altitude to the hypotenuse is 4. The pieces of the hypotenuse are 2 and $x + 2$. Find x.

3 ●○○ $JM = 16$ and $MK = 9$. Find the altitude and both legs.



4 ●○○ Find x, y, and z. Use simplest radical form.



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Preview - the full worksheet and its answer key are at primeworksheet.com