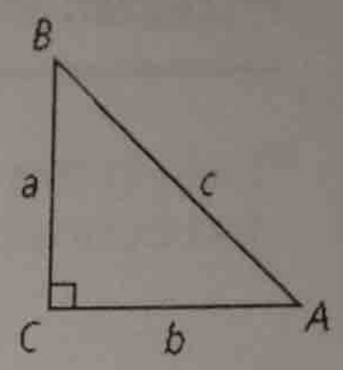
Homework 7.1: Right Triangle Trig

Name: _____

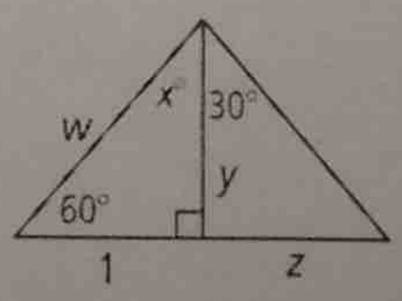
Math 3

Puzzle: What Looks Better Than a Right Triangle?

Solve for the indicated side length(s) and/or angle measure(s) for each right triangle with the given measurements. Round your answers to the nearest tenth.



Show your work on a separate sheet of paper!

$b = 4$ and $c = 5$ **1.** Find a. $a = 3$	$a = 12$ and $c = 13$ **2.** Find b. $12^2 + b^2 = 13^2$ $b = 5$	$a = 16$ and $b = 12$ **3.** Find c. $16^2 + 12^2 = c^2$ $c = 20$	$a = 8, b = 5.61, c = 9.8$ **4.** Find $m\angle A$ using inverse tangent. $\tan A = 8/5.61$ $\angle A = 55°$
$b = 1.3$ and $c = 2$ **5.** Find a. $a^2 + 1.3^2 = 2^2$ $a = 1.5$	$b = 2$ and $c = 7.8$ **6.** Find a. 7.5 **7.** Find $m\angle A$. 75.1°	$c = 7.2$, $m\angle A = 33.7$ **8.** Find b. = 6 **9.** Find a. = 4	$a = 2$ and $b = 2$ **10.** Find $m\angle A$. 45°
$a = 9, m\angle A = 45, m\angle B = 45$ **11.** Find c. = 12.7 **12.** Find b. = 9	$b = 4$ and $c = 8.9$ **13.** Find a. 8	$a = 7, b = 7.8$ $c = 10.5$ **14.** Find $m\angle A$. 41.9°	$a = 5.4$ and $b = 4.5$ **15.** Find c. 7
$a = 16, b = 6$, $c = 17.1$ **16.** Find $m\angle B$ using inverse sine. 20.5° **17.** Find $m\angle A$ using inverse sine. 69.3° $\sin B = \frac{6}{17.1}$ $\sin A = \frac{16}{17.1}$	$a = 7.1, b = 6, c = 9.3$ **18.** Find $m\angle B$. $\sin B = \frac{6}{9.3}$ $\angle B = 40.2°$	$a = 9.7$, $m\angle A = 75.5$, $m\angle B = 14.5$ **19.** Find c. = 10 **20.** Find b using inverse cosine. $\cos 75.5 = b/10$ $b = 2.4$	$a = 4.2, b = 17.5, c = 18$ **21.** Find $m\angle B$ using inverse sine. $\sin B = \frac{17.5}{18}$ $\angle B = 76.5°$
$b = 1, c = 2$ **22.** Find $m\angle A$. $\cos A = 1/2$ $\angle A = 60°$	**23.** Find w. 2 **24.** Find x. 30° **25.** Find y. 1.7 **26.** Find z. 1		

Homework 8.1: Right Triangle Trig

Math 3

Name: _____

Puzzle: What Looks Better Than a Right Triangle?

Then, in the array of dots below, find the answer that corresponds to each missing measurement and connect the dots as indicated below. Lift your pencil and begin a new line at each bullet.

- Connect answers 1–3.
- Connect answers 4 and 5.
- Connect answers 6–9.
- Connect answers 10–13.
- Connect answers 14 and 15.
- Connect answers 16 and 17.
- Connect answers 18–21.
- Connect answers 22 and 23.
- Connect answers 24–26 and back to answer 24.

EXAMPLE: For the first bullet, place your pencil on the dot that represents the answer to #1. Without lifting your pencil, continue to draw a straight line to the answers for #2 and #3. Lift your pencil. Continue to the next bullet.