

Why Did the Population Expert Feel Like He Was Going Crazy?



Determine whether or not the given numbers are possible measures for the sides of a right triangle. Circle the letters next to each correct answer. Find the lower case letter in a box at the bottom of the page and write the upper case letter below it.

$a = 6 \quad b = 8 \quad c = 10$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 1 Right triangle? yes i-O no f-K	$a = 10 \quad b = 12 \quad c = 14$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 2 Right triangle? yes m-B no t-S	$a = 5 \quad b = 12 \quad c = 13$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 3 Right triangle? yes e-A no q-R
$a = 11 \quad b = 11 \quad c = 15$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 4 Right triangle? yes v-D no r-E	$a = 7 \quad b = 24 \quad c = 25$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 5 Right triangle? yes k-T no h-P	$a = 4 \quad b = 9 \quad c = \sqrt{97}$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 6 Right triangle? yes a-H no p-V
$a = 14 \quad b = \sqrt{204} \quad c = 20$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 7 Right triangle? yes o-S no b-U	$a = \sqrt{160} \quad b = 13 \quad c = 18$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 8 Right triangle? yes c-F no f-D	$a = 2.7 \quad b = 3.6 \quad c = 4.5$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 9 Right triangle? yes v-S no n-G
$a = 3.2 \quad b = 5.8 \quad c = 6.7$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 10 Right triangle? yes u-O no m-H	$a = 16 \quad b = \sqrt{300} \quad c = \sqrt{556}$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 11 Right triangle? yes b-E no d-M	$a = 8 \quad b = 15 \quad c = 17$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 12 Right triangle? yes q-C no j-R
$a = 30 \quad b = 40 \quad c = 50$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 13 Right triangle? yes h-L no s-A	$a = 40 \quad b = 50 \quad c = 60$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 14 Right triangle? yes l-S no n-I	$a = 10 \quad b = 24 \quad c = 26$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 15 Right triangle? yes u-U no g-E
$a = 0.9 \quad b = 4.0 \quad c = 4.1$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 16 Right triangle? yes d-H no c-R	$a = \sqrt{2} \quad b = \sqrt{2} \quad c = 2$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 17 Right triangle? yes j-S no p-O	$a = 1 \quad b = 1 \quad c = \sqrt{2}$ $a^2 = \underline{\hspace{1cm}} \quad b^2 = \underline{\hspace{1cm}} \quad c^2 = \underline{\hspace{1cm}}$ 18 Right triangle? yes s-N no l-T

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v
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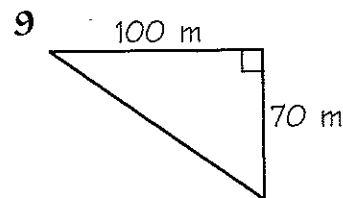
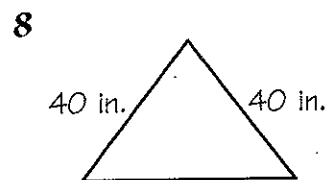
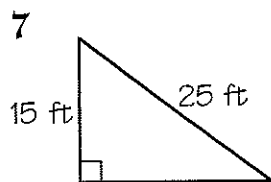
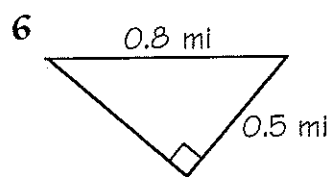
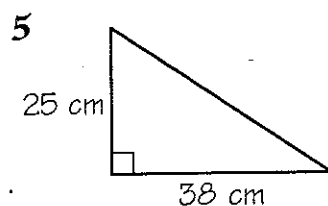
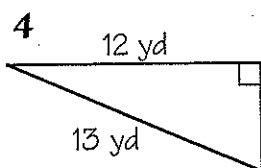
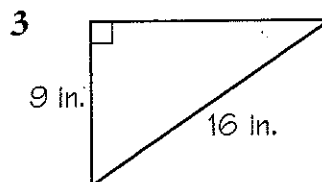
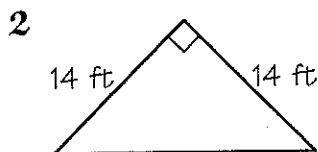
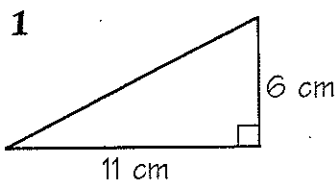
Did You Hear About . . .

Use the Pythagorean Theorem to solve each problem.

Show all steps on notebook paper.

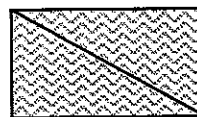
For all problems, write the exact answer in simplest radical form and the approximate answer rounded to the nearest tenths.

#10-14. Also draw and label the right triangle described.

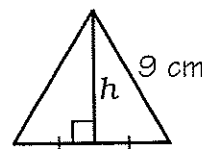


Solve.

- 10 Mr. Smog just bought a big-screen TV set. The screen is 48 in. wide and 27 in. high. Find the length of its diagonal.



- 11 An 18-foot ladder is leaned against a wall. If the base of the ladder is 7 feet from the wall, how high up on the wall does the ladder reach?
- 12 Hulk left home and walked 8 blocks west. Then he turned and walked 6 blocks north. If each block is 500 ft long, how far is Hulk from home?
- 13 Each side of an equilateral triangle measures 9 cm. Find the height, h , of the triangle.



- 14 The lawn in front of Kermit Middle School is in the shape of a rectangle 30 yd long and 16 yd wide. How much shorter is your walk if you walk diagonally across the lawn rather than along two sides of it?