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.

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

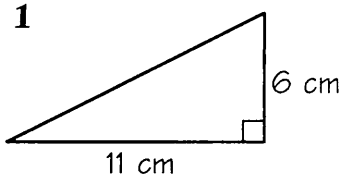
Did You Hear About . . .

1	2	3	4	5	6	7
8	9	10	11	12	13	14 ?

Write the word next to each correct answer in the box that contains the exercise number (some answers are rounded).

Find the missing side length, if possible.

1



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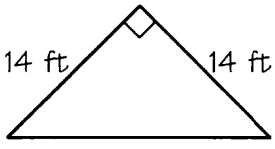

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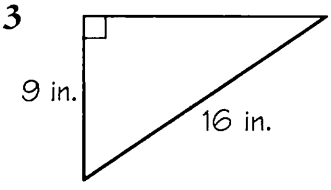

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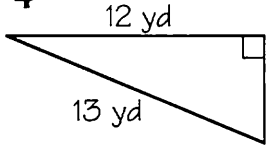

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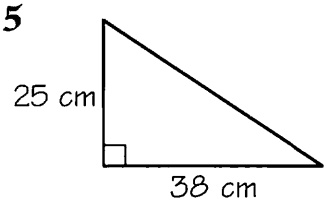

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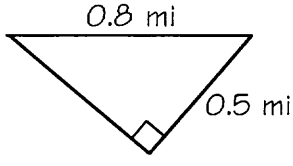

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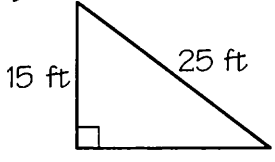

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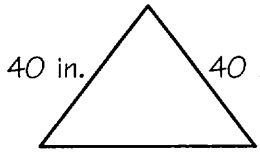

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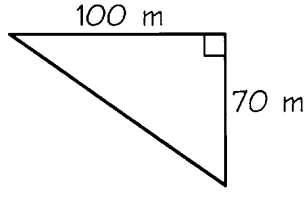
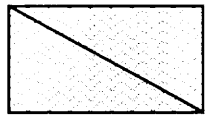


Solve.

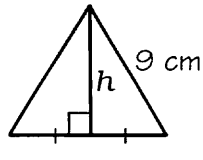
10 Mr. Smog just bought a big-screen TV set. The screen is 48 in. wide and 27 in. high. Find the length of its diagonal.



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?

12.9 in. • BOOK
0.6 mi • AROUND
55.1 in. • BY
12 yd • ROUTE
0.7 mi • FROM
6000 ft • BIGGER
5 yd • WHO
12.5 cm • THE
5000 ft • A
44.9 cm • TRIED
20 ft • A
17.2 ft • PUTTING
13.2 in. • STUDENT
122.1 m • BLOCK
56.5 in. • BECAUSE
45.5 cm • WALKED
16.6 ft • TAKING
8.3 cm • NUMBER
19.8 ft • MATH
7 yd • FIGURE
7.8 cm • SQUARE
121.5 m • COUNTING
not possible • CITY