



# TECH TIPS



## SQUARING YOUR TENT

### PYTHAGOREAN THEOREM

In mathematics, the Pythagorean theorem (American English) or Pythagoras' theorem (British English) is a relation in Euclidean geometry among the three sides of a right triangle. The theorem is named after the Greek mathematician Pythagoras, who by tradition is credited with its discovery and proof, although it is often argued that knowledge of the theory predates him. (There is much evidence that Babylonian mathematicians understood the principle, if not the mathematical significance). The theorem is as follows:

In any right triangle, the area of the square whose side is the hypotenuse (the side opposite the right angle) is equal to the sum of the areas of the squares whose sides are the two legs (the two sides that meet at a right angle).

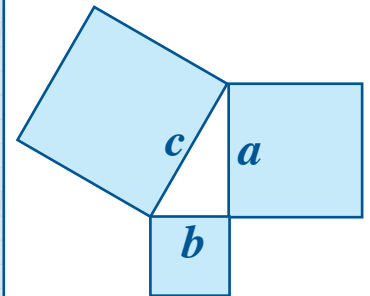
#### THIS IS SUMMARIZED AS FOLLOWS:

If we let  $c$  be the length of the hypotenuse and  $a$  and  $b$  be the lengths of the other two sides, the theorem can be expressed as the equation:

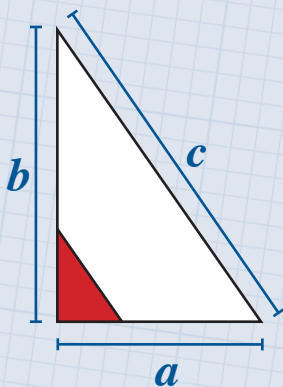
$$a^2 + b^2 = c^2$$

#### TOOLS YOU NEED:

- 2 – 300 ft open reel tape measures
- 4 – Awls (screwdrivers or nails will do in a pinch)
- 1 – Small Hammer to drive awls into the ground or asphalt
- 1 – Can upside-down Marking Paint (use white as it won't interfere with utility markings)
- 1 – Calculator to calculate diagonal measurement using the Pythagorean theorem, or a drawing-samples on following pages, or a layout matrix-sample on following pages.



The Pythagorean theorem: The sum of the areas of the two squares on the legs ( $a$  and  $b$ ) equals the area of the square on the hypotenuse ( $c$ ).



### 3-4-5 RULE $a = 3, b = 4, c = 5$

For squaring up a tent, use the 3-4-5 rule. The best place to start is in one corner of the tent layout. The corner would be a right angle with two sides. Layout the "A" dimension on the end of the tent. Next layout the "B" dimension down the side of the tent. Then make the "C" dimension fit between the end of A and B. Now you have a square corner.

For larger projects, simply use a larger number combination making all three numbers divisible by 3-4-5, i.e., 21'-28'-35', 30'-40'-50', 60'-80'-100'

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## SQUARING YOUR TENT ...CONTINUED

WIDTH OF TENT									
	20'	30'	40'	50'	60'	70'	80'	90'	100'
20'	28' 3"	36' 1"	44' 9"	53' 10"	63' 3"	72' 10"	82' 6"	92' 2"	102' 0"
30'	36' 1"	42' 5"	50' 0"	58' 4"	67' 1"	76' 2"	85' 5"	94' 10"	104' 5"
40'	44' 9"	50' 0"	56' 7"	64' 0"	72' 1"	80' 7"	89' 5"	98' 6"	107' 8"
45'	49' 3"	54' 1"	60' 3"	67' 3"	75' 0"	83' 3"	91' 9"	100' 7"	102' 0"
50'	53' 10"	58' 4"	64' 0"	70' 9"	78' 1"	86' 0"	94' 4"	102' 11"	111' 10"
60'	63' 3"	67' 1"	72' 1"	78' 1"	84' 10"	92' 2"	100' 0"	108' 2"	116' 7"
70'	72' 10"	76' 2"	80' 7"	86' 0"	92' 2"	98' 6"	106' 4"	114' 0"	122' 1"
75'	77' 7"	80' 9"	85' 0"	90' 2"	96' 0"	102' 7"	109' 8"	117' 2"	125' 0"
80'	82' 6"	85' 5"	89' 5"	94' 4"	100' 0"	106' 4"	113' 2"	120' 5"	128' 1"
90'	92' 2"	94' 10"	98' 6"	102' 11"	108' 2"	114' 0"	120' 5"	127' 3"	134' 6"
100'	102' 0"	104' 5"	107' 8"	111' 10"	116' 7"	122' 1"	128' 1"	134' 6"	141' 5"
110'	111' 10"	114' 0"	117' 1"	120' 10"	125' 4"	130' 5"	136' 0"	142' 2"	148' 8"
120'	121' 8"	123' 8"	126' 6"	130' 0"	134' 2"	138' 11"	144' 3"	150' 0"	156' 2"
130'	131' 6"	133' 5"	136' 0"	139' 3"	143' 2"	147' 8"	152' 8"	158' 1"	164' 0"
140'	141' 5"	143' 2"	145' 7"	148' 8"	152' 4"	156' 6"	161' 3"	166' 5"	172' 0"
150'	151' 4"	153' 0"	155' 3"	158' 1"	161' 7"	165' 6"	170' 0"	174' 11"	180' 3"
160'	161' 3"	162' 9"	164' 11"	167' 7"	170' 11"	174' 8"	178' 11"	183' 6"	188' 8"
170'	171' 2"	172' 8"	174' 8"	177' 2"	180' 3"	183' 10"	187' 11"	192' 4"	197' 3"
180'	181' 1"	182' 6"	184' 5"	186' 10"	189' 9"	193' 2"	197' 0"	202' 3"	205' 11"
190'	191' 1"	192' 4"	194' 2"	196' 6"	199' 3"	202' 6"	206' 2"	210' 3"	214' 9"
200'	201' 0"	202' 3"	204' 0"	206' 2"	208' 10"	211' 11"	215' 5"	219' 4"	223' 7"
210'	211' 0"	212' 2"	213' 9"	215' 10"	218' 5"	221' 4"	224' 8"	228' 6"	232' 7"
220'	221' 0"	222' 0"	223' 7"	225' 7"	228' 0"	230' 10"	234' 1"	237' 8"	241' 8"



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