Homework Questions?

How Do Golf Balls Get Around?

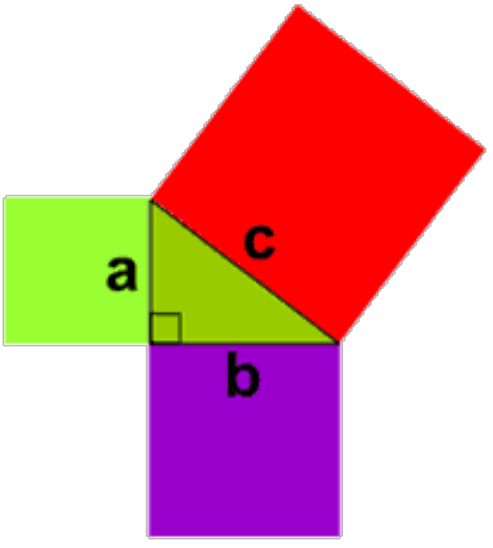
Indicate whether each statement is true (T) or false (F) by circling the appropriate letter next to it. Write this letter in the box containing the exercise number. If the statement is false, explain why or give a counterexample.

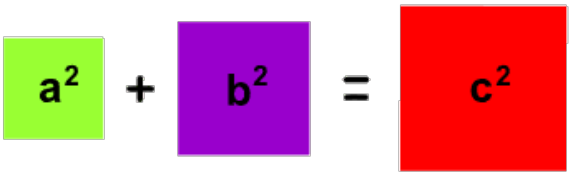
	T	F
1 Any number that can be expressed as the ratio of two integers, $\frac{a}{b}$, where $b \neq 0$, is a rational number. *If false, explain:*	R	K
2 Each of these numbers is a rational number: -4.3 $\frac{4}{19}$ 7.66 $-5\frac{2}{3}$ *If false, explain:*	E	O
3 Assume that the denominator of a fraction is not zero. When you divide the numerator by the denominator, you always get a decimal that ends (a terminating decimal). *If false, explain:*	P	I
4 Assume that the denominator of a fraction is not zero. When you divide the numerator by the denominator, you always get either a decimal that terminates or a decimal with a digit or block of digits that repeats again and again (a repeating decimal). *If false, explain:*	D	U
5 Every terminating decimal can be expressed as the ratio of two integers, $\frac{a}{b}$, with $b \neq 0$. Therefore, every terminating decimal is a rational number. *If false, explain:*	E	L
6 Every repeating decimal can be expressed as the ratio of two integers, $\frac{a}{b}$, with $b \neq 0$. Therefore, every repeating decimal is a rational number. *If false, explain:*	T	S
7 Each of these decimals represents a rational number: 0.121212 $0.1212121212121212\ldots$ $0.12122122212222122222\ldots$ *If false, explain:*	A	E
8 The square root of a whole number is always an integer. *If false, explain:*	R	Y
9 The square root of a whole number is always a rational number. *If false, explain:*	D	N
10 The square root of a whole number is either an integer or an irrational number. *If false, explain:*	H	O
11 Each of these square roots is a rational number: $\sqrt{4}$ $-\sqrt{169}$ $\sqrt{81}$ $\sqrt{80}$ *If false, explain:*	T	A
12 The square root of a fraction or decimal is always an irrational number. *If false, explain:*	S	V
13 Every point on the number line can be represented by either a rational or an irrational number. Together these two sets form the set of real numbers. *If false, explain:*	R	O

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

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

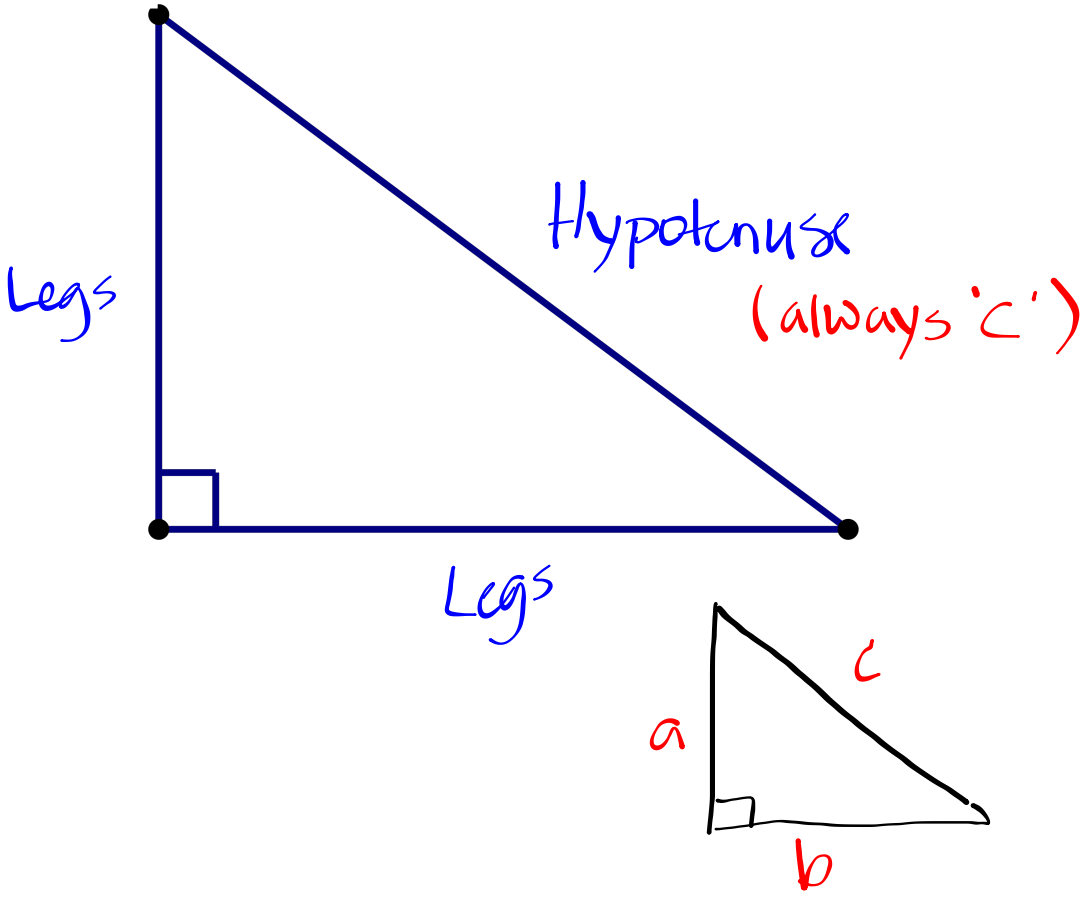
Pythagorean Theorem



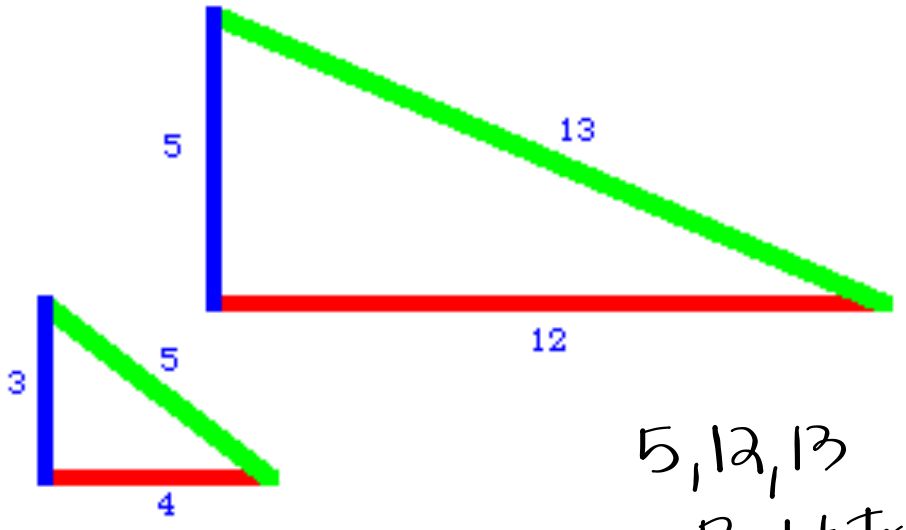


Pythag Water Demo.mp4

Pythagorean Theorem



Pythagorean Triples

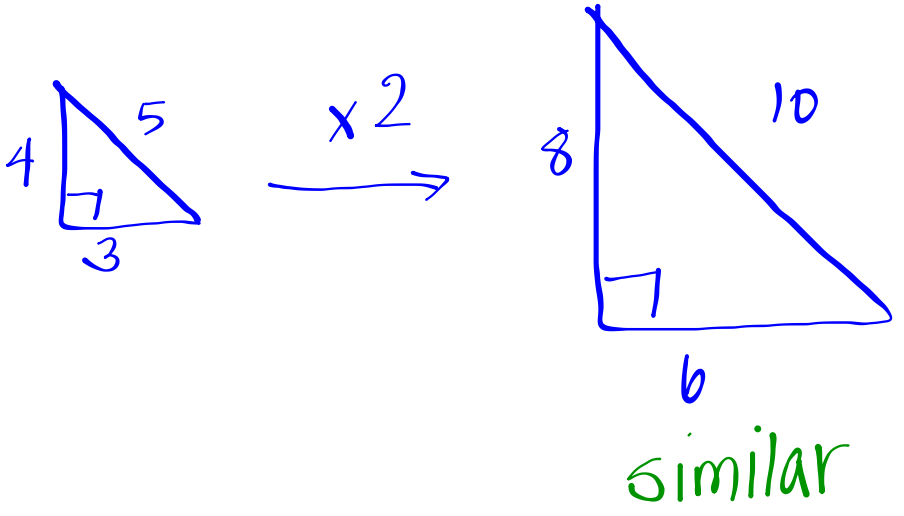


5, 12, 13
Right Triangle

3, 4, 5 Right
Triangle

If a 3, 4, 5 triangle is a right triangle, do you think a 6, 8, 10 triangle is also a right triangle?

Think about what you know about shrinking and stretching...



Other triples:

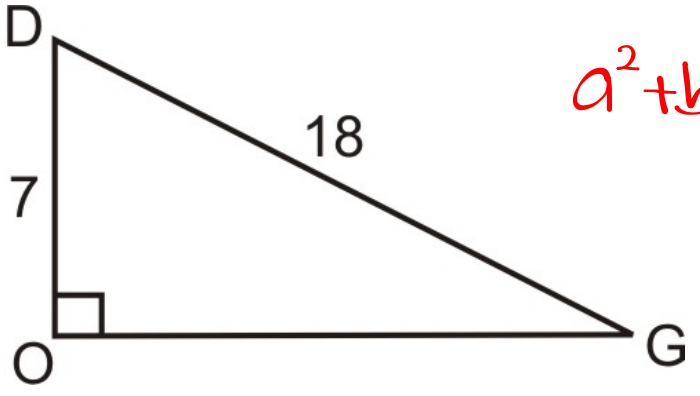
12, 16, 20

9, 12, 15

24, 32, 40

30, 40, 50

Δ DOG a right triangle



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

What is the length of OG?

Start with formula

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

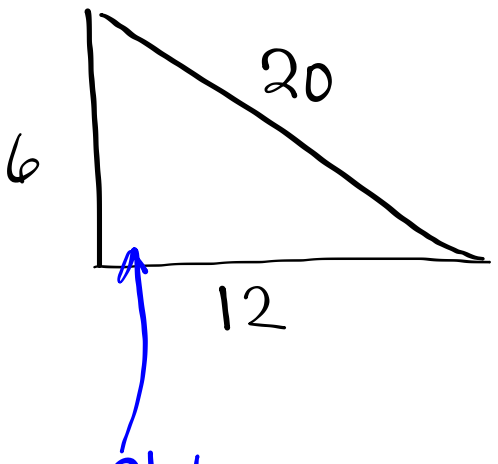
$7^2+b^2=18^2$

$49+b^2=324$

$-49 \quad -49$

$\sqrt{b^2}=\sqrt{275}$

$b=16.58$



Is this a right triangle?

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

$6^2 + 12^2 \stackrel{?}{=} 20^2$

$36 + 144 \stackrel{?}{=} 400$

$180 \neq 400$

This is NOT a right triangle!

What Did Dr. Dripp Say to the Bleeding Kid Who Refused to Get Stitches?

Find the missing side length, if possible (some answers are rounded). Cross out the letter next to the correct answer. When you finish, the answer to the title question will remain.

For Exercises 1-8, refer to the diagram at the right.

1. $a = 6, b = 8$

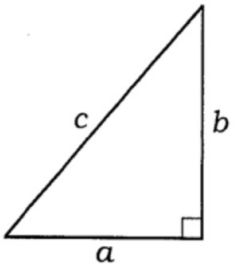
$c =$ _____

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

2. $a = 10, b = 7$

$c =$ _____

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



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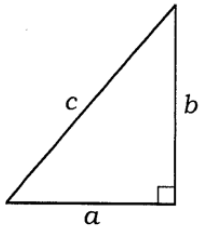


1. $a = 6$, $b = 8$
   $c =$ _____

2. $a = 10$, $b = 7$
   $c =$ _____

3. $a = 15$, $b = 15$
   $c =$ _____

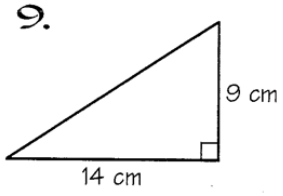
4. $a = 10$, $c = 26$
   $b =$ _____

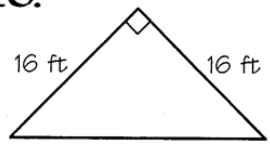
5. $b = 30$, $c = 50$
   $a =$ _____

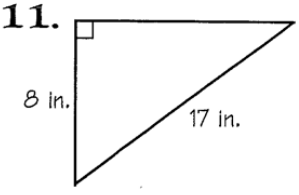
6. $a = 5$, $c = 12$
   $b =$ _____

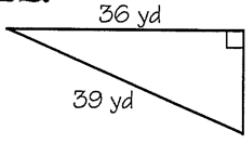
7. $b = 13$, $c = 20$
   $a =$ _____

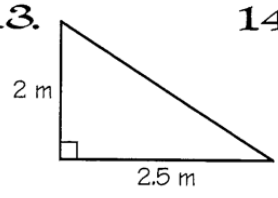
8. $a = 1.5$, $b = 2$
   $c =$ _____

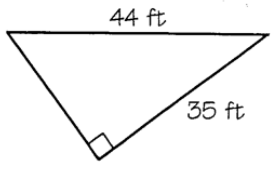
9. 

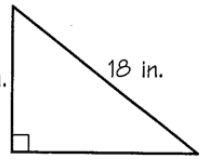
10. 

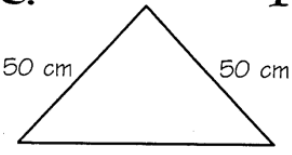
11. 

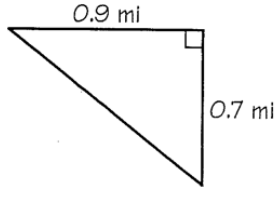
12. 

13. 

14. 

15. 

16. 

17. 

THSTOELLPFIT	Answers 1-8
	40
	12.2
	2.8
	10.9
	2.5
	42
	22.9
	24
	15.2
	11.5
	10
	21.2

ASOCUPTRBUERLED	Answers 9-17
	3.2 m
	17.4 cm
	22.6 ft
	16 yd
	14.2 in.
	24.5 ft
	15 in.
	not possible
	1.3 mi
	26.7 ft
	3.6 m
	1.1 mi
	16.6 cm
	14.6 in.
	15 yd

Homework

Finish classwork