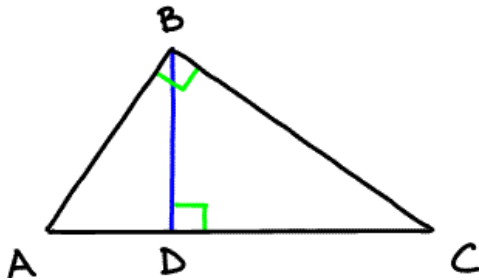


- *20 questions
- *Calculators allowed
- *Show all work/steps- use separate paper
- *Recommend time frame 30min -45min

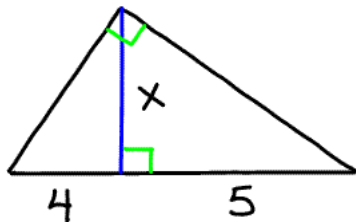
Provide complete explanations in your responses.

Similar Right Triangles

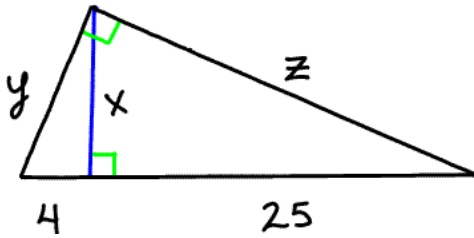
- How many similar right triangles are in the figure below?



- Find the value of the variable.

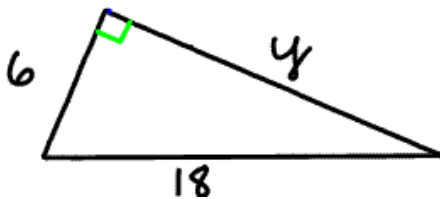


3. Find the value of the variables.



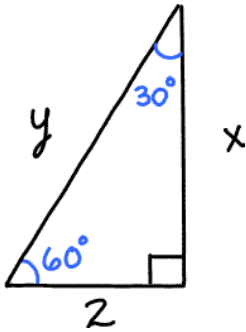
The Pythagorean Theorem

4. Explain the usefulness of the Pythagorean Theorem.
5. Is a triangle with sides 6, 9, 12 a right triangle? Explain.
6. Find the value of the variable.

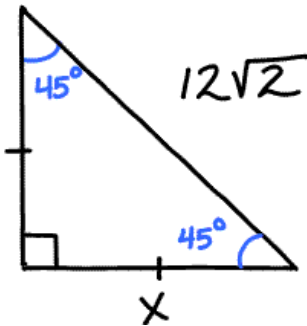


Special Right Triangles

7. Name the two types of special right triangles.
8. Find the values of the variables.



9. Find the value of the variable.

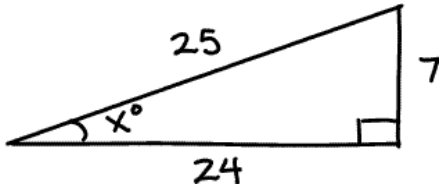


10. A $30^\circ - 60^\circ$ right triangle has a hypotenuse of length of $(6x + 2)$ units. Find the length of the other sides in terms of x .

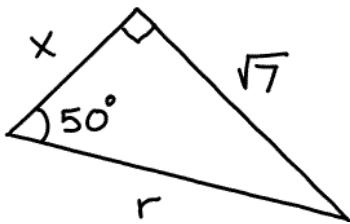
Trigonometric Ratios

11. What does the saying “SOH- CAH- TOA” mean?

12. True/False: trigonometric ratios compare the sides of a right triangle?
13. Define the cosine ratio.
14. What is this function called $\sin^{-1} x$?
15. Find the tangent of angle x°



16. What is the sine of 78.2° ?
17. What angle has the cosine of .6156614 ?
18. Find the measure of the angle x in question 15.
19. Find the value of the variables.



Right Triangle Word Problems

20. A person views the top of a flag pole at an angle of elevation of 16° . How far away is the person from the pole? (the flag pole is 45ft. tall)