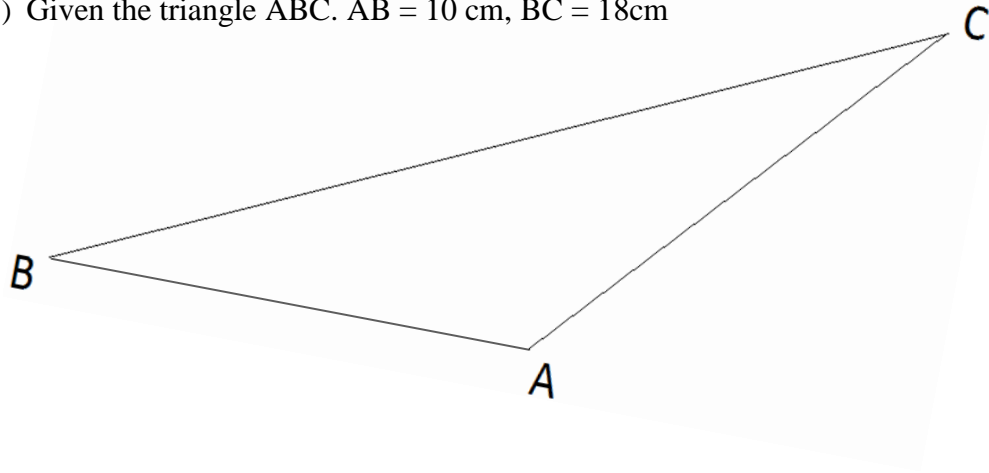


Name:

QUIZ – MATH GRADE 10

1. (30%) Given the triangle ABC. $AB = 10$ cm, $BC = 18$ cm

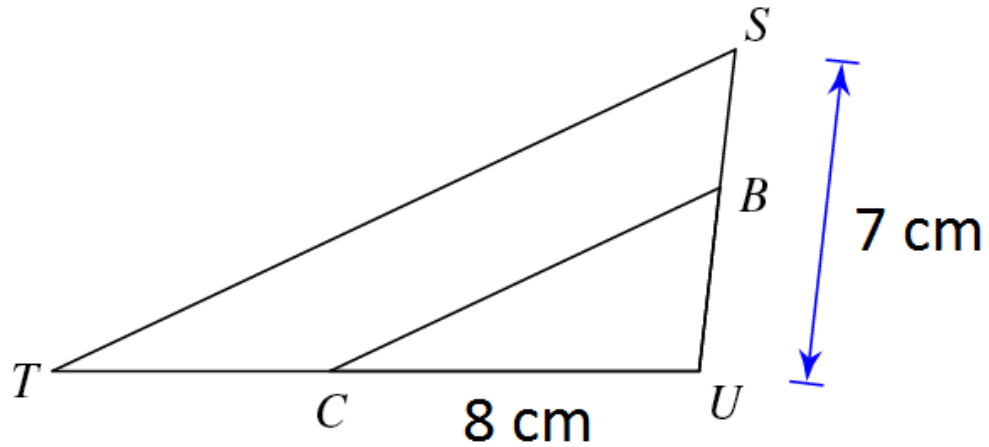


- a. (9%) Sketch all the altitudes of the triangle name them h_1 , h_2 , h_3 .
- b. (10%) Knowing that the altitude that corresponds to vertex A is 8 cm, find AC and the perimeter of the triangle.
- c. (5%) Find the area of the triangle.
- d. (6%) Use the area of the triangle to find the other 2 altitudes.

2. (15%) Given the isosceles triangle ABC. $AB = 13 \text{ cm} = BC$.
- a. (5%) Sketch the triangle.
- b. (10%) Given that the area of the triangle is 60 cm^2 , write 2 equations with 2 variables representing this information.
3. (5%) Bonus Solve the equations
4. (20%) Given a right angled triangle in which one leg is 1 cm more than the other and the hypotenuse is 9 cm longer than the shorter leg. Find the area and perimeter of the triangle.

5. (5%) All isosceles right triangles are similar: True /False, explain:

6. (20%) Given the following diagram in which BC is parallel to ST . $CU = 8\text{cm}$, $SU = 7\text{cm}$, $SB = 3\text{cm}$. Find the length TC . Show all work. If using similar triangles explain why they are similar.



7. (10%) Explain all the ways in which triangles can be proved similar, give an example in each case.