

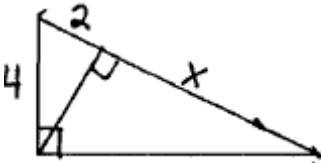
**SHOW WORK.**

**Give exact answers in simplest form (no decimals). Do not use trigonometry.**

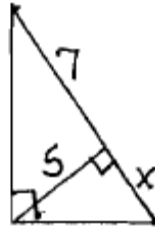
1. Is the triangle with sides 3, 10, and 8 right, acute, or obtuse?

2. The diagonals of a rhombus are 4 cm and 12 cm. Find the perimeter.

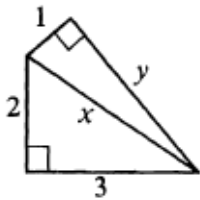
3. Find  $x$ .



4. Find  $x$ .

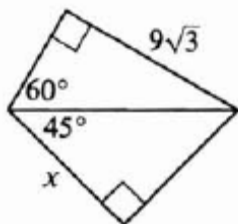


5. Find  $x$  and  $y$ .

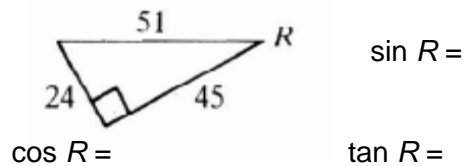


6. The perimeter of an equilateral triangle is 21. Find the altitude.

7. Find  $x$ .

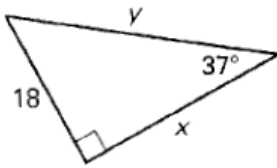


8. Give each ratio in simplest form.

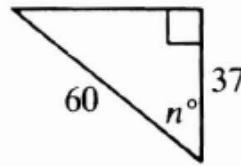


Use trigonometry to solve each problem. Round answers to the nearest tenth.

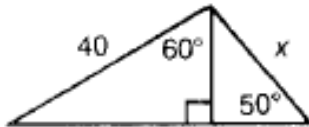
9. Find  $x$  and  $y$ .



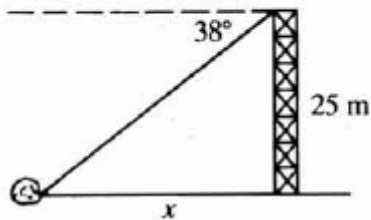
10. Find  $n$ .



11. Find  $x$ .



12. The angle of depression from the top of a tower to a boulder on the ground is  $38^\circ$ . If the tower is 25 m high, how far from the base of the tower is the boulder?



13. Find the vertex angle of an isosceles triangle with sides 6, 6, and 7.