

Name: \_\_\_\_\_

Grade 8

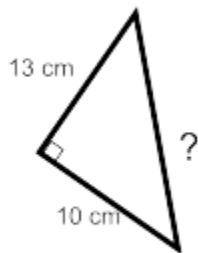
Unit 1 – Square Roots and Pythagorean Theorem Test REVIEW

Show your work for the following

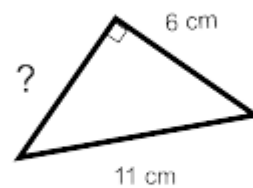
1. List the factors of 216. Is the number a perfect square? Explain with numbers of factors.

2. Find the length of the indicated side in each triangle (SHOW WORK)

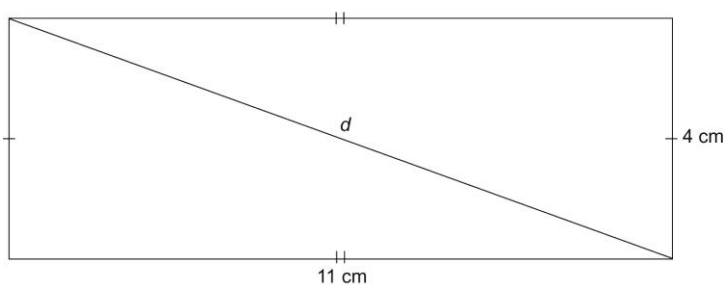
(a)



(b)



3. Find the length of the diagonal,  $d$ , in this rectangle.



4. Simplify.

a) square 49 = \_\_\_\_\_

b) square root of 36 = \_\_\_\_\_

c)  $(\sqrt{35})^2 =$  \_\_\_\_\_

5. Estimate the following (make sure to show work)

(a)  $\sqrt{190}$

(b)  $\sqrt{20}$

7. Determine whether a triangle with each set of side lengths is a right triangle. Justify your answers. (Show work)  
8cm, 9 cm, and 11 cm

8. A trucker has two companies to choose to work at.  
Company A follows route 1 and pays \$15/km  
Company B follows route 2 and pays \$19/km



- a) What is the trucker's pay if he goes with company A?
- b) What is the trucker's pay if he goes with company B?  
(Note: this requires 2 steps)
- c) Which is the better option? Explain