Dear Parents / Students

Due to the unprecedented situation, Knowledgeplus Training center is mobilized and will keep accompanying and supporting our students through this difficult time. Our Staff will be continuously, sending notes and exercises on a weekly basis through what's app and email. Students are requested to copy the notes and do the exercises on their copybooks. The answers to the questions below will be made available on our website on knowledgeplus.mu/support.php. Please note that these are extra work and notes that we are providing our students and all classes will be replaced during the winter vacation. We thank you for your trust and are convinced that, together, we will overcome these troubled times.

Knowledgeplus Training Center

Mathematics

Garde 8

Week 7

Notes and Exercise

Note:(All the Notes, Examples and Exercise are on the photos and Note:(Please copy all the Notes, Examples and Exercises on your copy book).

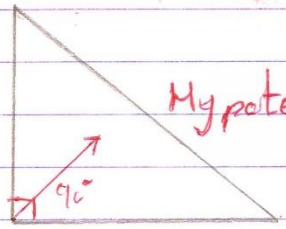
Mathematics Grade 8 week 7.

PYTHAGORAS THEOREM

The right - angled triangle.

A right - angle triangle is a triangle in which one angle is a right angle, that is, 90°.

The hypotenuse is the longest side in a righ - angled triangle.



Note: the Hypotenuse is opposite the 90°

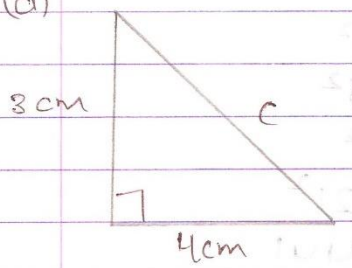
The Pythagoruse Theorem

The most freqiently quiestion that you will get in exams is to the lenght of any side of the right angle triangle.

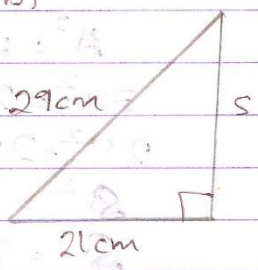
Example:

Find the unknown lenghts

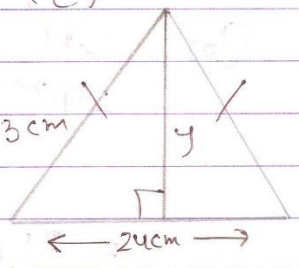
(a)

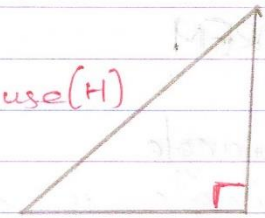


(b)



(c)





formula for Pythagoras theorem is

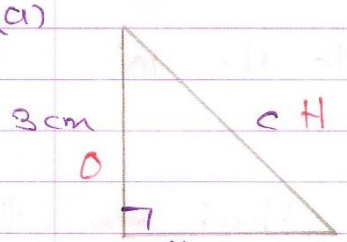
~~b. Hypotenuse~~

The square of Hypotenuse = Square of adjacent + Square of opposite.

$\therefore H^2 = A^2 + O^2$

Solution

(a)



We need to find the value of c

$H^2 = A^2 + O^2$

$\therefore C^2 = 4^2 + 3^2$

$C^2 = 16 + 9$

$C^2 = 25$

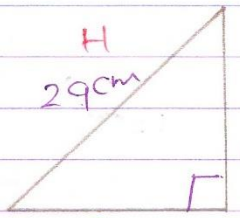
$C = \sqrt{25}$

$= 5$

$\therefore C = 5$

You must always label the right angle triangle

(b)



$H^2 = A^2 + O^2$

$29^2 = 21^2 + S^2$

$29^2 - 21^2 = S^2$

$S^2 = 29^2 - 21^2$

$S^2 = 841 - 441$

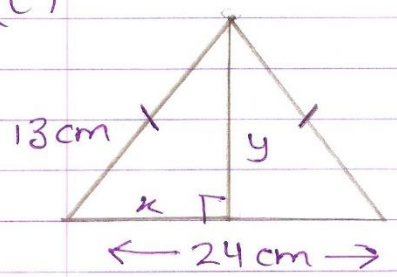
$S^2 = 400$

$S = \sqrt{400}$

$= 20cm$

$\therefore S = 20cm.$

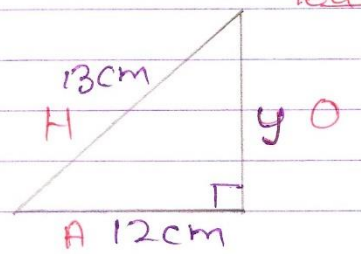
(c)



To find x you must the half of the triangle.

$x = \frac{24}{2}$

$= 12cm$



$H^2 = A^2 + O^2$

$13^2 = 12^2 + y^2$

$169 = 144 + y^2$

$169 - 144 = y^2$

$25 = y^2$

$y^2 = 25$

$y = \sqrt{25}$

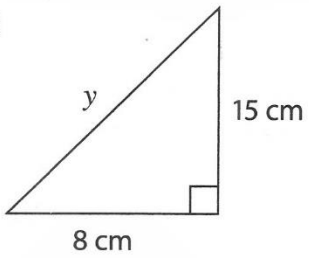
$y = 5$

For week 8 we will do Application of Pythagorean Theorem in Real-life Situation.

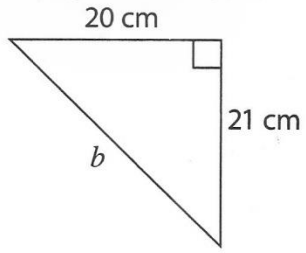
Attempt All Question.

2. Use Pythagoras theorem to find the value of the unknowns.

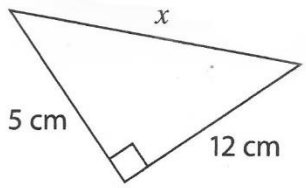
(a)



(b)

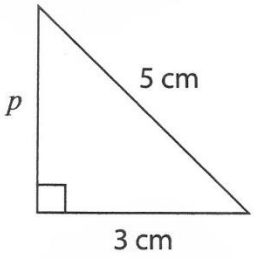


(c)

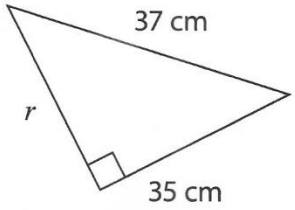


3. Use Pythagoras theorem to find the value of the unknowns.

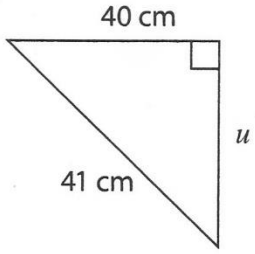
(a)



(b)

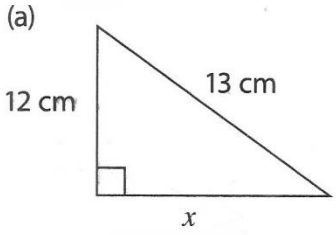


(c)

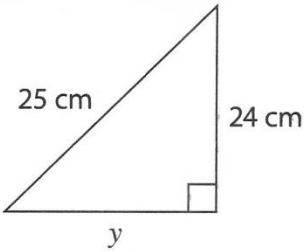


4. Use Pythagoras theorem to find the value of the unknowns.

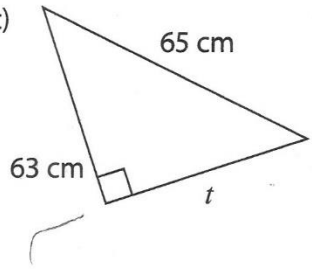
(a)



(b)

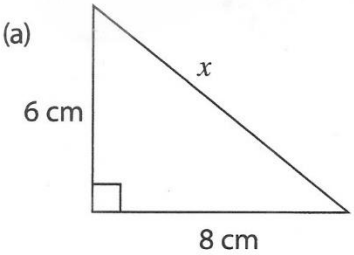


(c)

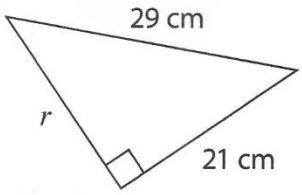


5. Use Pythagoras theorem to find the value of the unknowns.

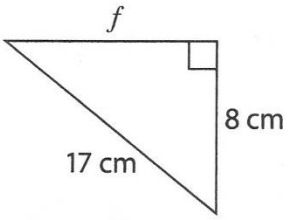
(a)



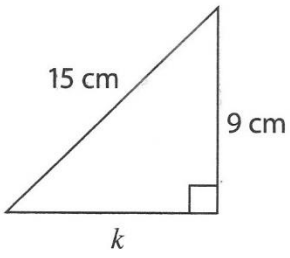
(b)



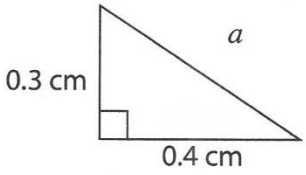
(c)



(d)



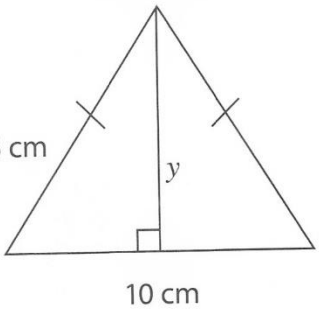
(e)



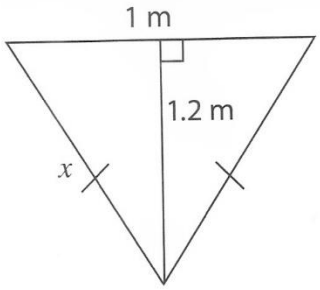
Attempt All Question.

6. Use Pythagoras theorem to find the value of the unknowns, leaving your answer in $\sqrt{\ }$ form.

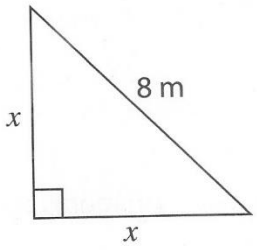
(a)



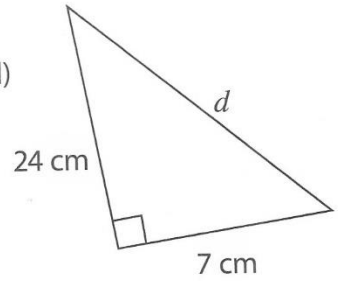
(b)



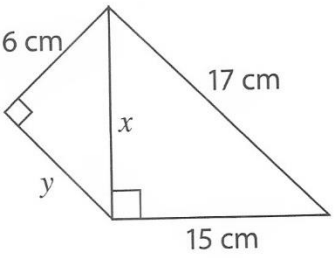
(c)



(d)



(e)



(f)