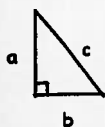


2.1 Pythagorean Theorem

pp 48 - 53



$$a^2 + b^2 = c^2$$

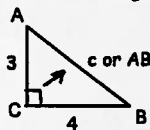
The theorem is used to find the missing side of a right triangle.

The longest side of a right triangle is called the hypotenuse. It is represented by the letter c.

The other two sides are called legs and are represented by the letters a and b.

Example 1

Find the length of side AB.



$$a^2 + b^2 = c^2$$

$$4^2 + 3^2 = c^2$$

$$16 + 9 = c^2$$

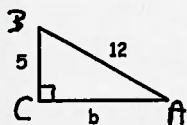
$$\frac{25}{25} = \frac{c^2}{c^2}$$

$$5 = c$$

Ⓢ hypotenuse

Example 2

Find the length of side b.



$$a^2 + b^2 = c^2$$

or

$$b^2 = c^2 - a^2$$

$$c^2 - a^2 = b^2$$

$$b^2 = 12^2 - 5^2$$

$$b^2 = 144 - 25$$

$$b^2 = 119$$

$$\sqrt{b^2} = \sqrt{119}$$

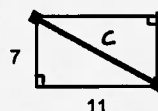
$$b = \sqrt{119}$$

$$b = 10.9087121$$

$$b = 10.91 \text{ rounded to two places}$$

Example 3

Find the length of the diagonal.



$$a^2 + b^2 = c^2$$

$$11^2 + 7^2 = c^2 \quad \textcircled{1}$$

$$121 + 49 = c^2$$

$$170 = c^2 \quad \textcircled{2}$$

$$\sqrt{170} = \sqrt{c^2}$$

$$\textcircled{3} \quad 13.04 = c$$

Friday - February 17th

Period Two(Rm 301) and Period Four (Rm 305) MFM 2P

1. Copy Example One - pg 47-48 (Neatly . .can't read zero)
2. Copy Example Two - pg 48 (Neatly . .can't read zero)
3. Pythagorean Theorem - Pg50-53 #2a,c , 3a,c , 5,7a,b 10 ,12,13

Hand in all three! I will not mark 2 or 3 if you do not do #1 and #2.

Due at end of class.