Solve the Triangle

Find all missing sides & angles.

Steps:

1. Look at the information given to you first.
2. Decide what you would like to solve for.
3. Solve using Soh Cah Toa or Pythagorean Theorem ($a^2 + b^2 = c^2$)

Remember: All angles in a triangle add up to 180°.
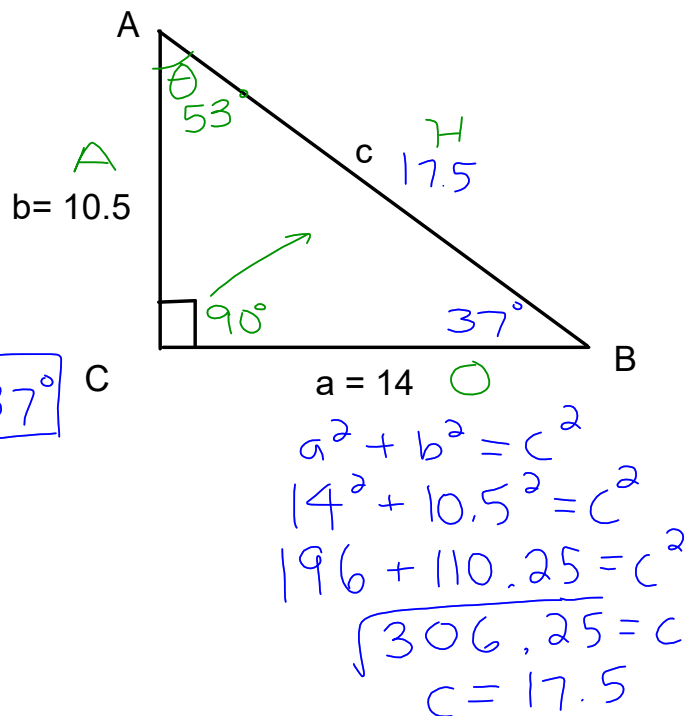
Ex 1)

To find

side c = $\boxed{17.5}$

$\angle$ A = $\boxed{53°}$

$\angle$ B = $180 - 90 - 53 = \boxed{37°}$

Pick any trig ratio

$\sin \theta = \dfrac{14}{17.5}$

$\theta = \sin^{-1} \left(\dfrac{14}{17.5} \right)$

$\theta = 53°$

A

θ
53°

b= 10.5

c H 17.5

90°

37°

C

a = 14

B

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

$14^2 + 10.5^2 = c^2$

$196 + 110.25 = c^2$

$\sqrt{306.25} = c$

$c = 17.5$

Ex 2) To find

side e = $\boxed{9.11}$
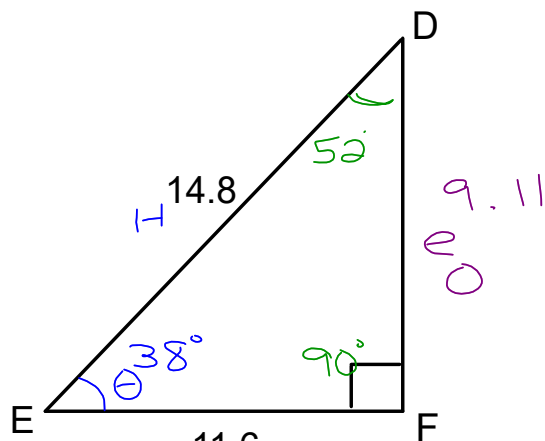
$\angle E = \boxed{38°}$

$\angle D = 90-38 = \boxed{52°}$

$\cos x = \dfrac{11.6}{14.8}$

$x = \cos^{-1}\left(\dfrac{11.6}{14.8}\right)$

$x = 38°$

$(14.8)\sin 38 = \dfrac{e}{14.8}(14.8)$

$e = 9.11$

14.8

H

52

9.11

e
O

38°

θ

90°

E   11.6   A   F

yellow Solving
   a Triangle WS
(not hand in) Key will
   be on Edmodo