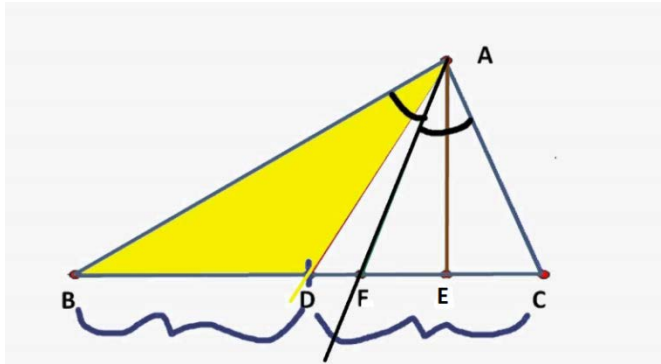


MATH 5: CLASSWORK 17,

February 9, 2020



AD-Median

AE- Altitude

AF- Angle Bisector

Triangle properties:

1. Sum of interior angles of a triangle is 180° .

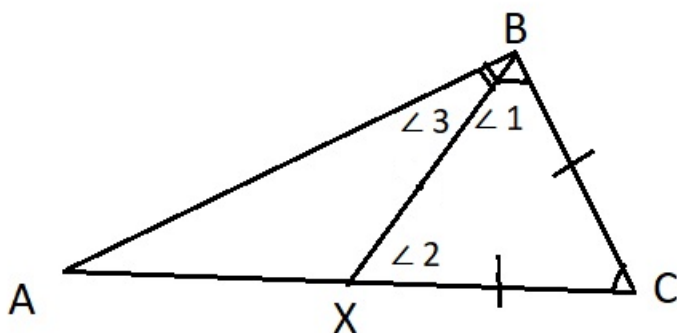
($\forall \Delta ABC, \angle ABC + \angle BCA + \angle BAC = 180^\circ$) New symbol $\forall$ - for any out there.

2. In any triangle the sum of 2 sides is always greater than the third.

($\forall \Delta ABC, AB + BC > AC$)

3. In **any triangle**,

- the **largest** interior **angle** is **opposite** the **largest side**.
- the **smallest** interior **angle** is **opposite** the **smallest side**
- the middle-sized interior angle is **opposite** the middle-sized side



$$\angle 1 = \angle 2 = \angle 3 + \angle A$$

Because

$$\angle 3 + \angle A + \angle AXB = 180$$

$$\angle B = \angle 1 + \angle 3 = \angle A + \angle 3 + \angle 3$$

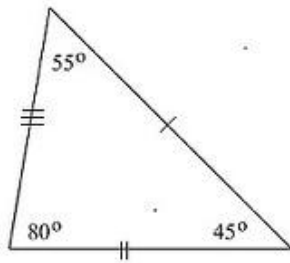
MATH5: HOMEWORK 17,

February 9, 2020

Write and draw on this page. Attach this page to your homework

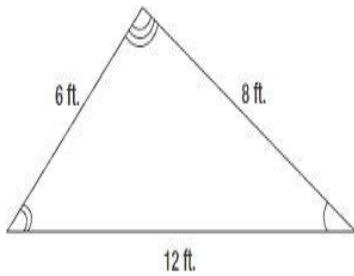
1. For the given triangles make the correct fit of angles and sides. The figures are not to scale, so don't try measuring angles with the protractor.

a)



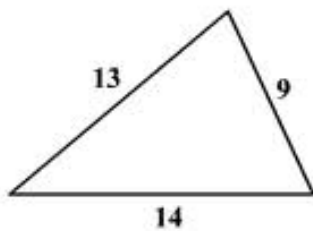
15cm, 10cm, 8cm

b)



44° , 70° , ?

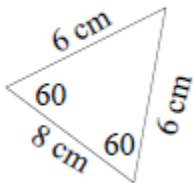
c)



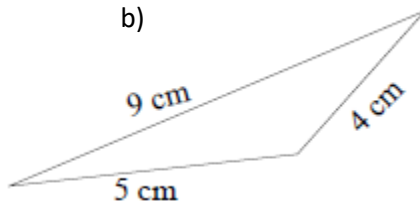
35° , 65° , ?

2. The triangles with such measurements do not exist. Describe what is wrong with them:

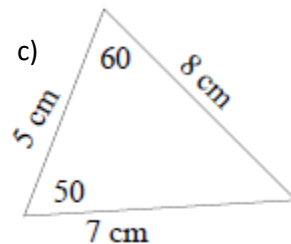
a)



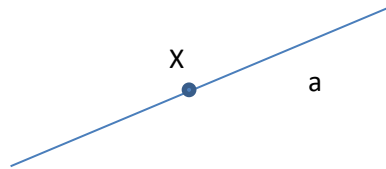
b)



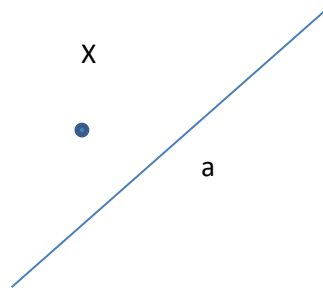
c)



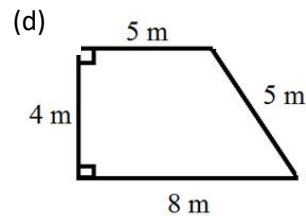
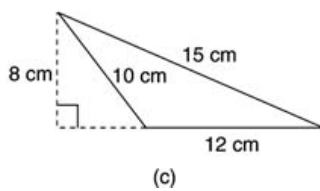
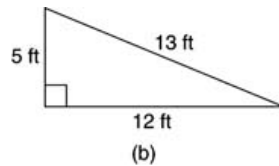
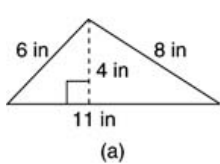
3. Using a ruler with no marks and a compass construct
- perpendicular line to a given line through a point on this line



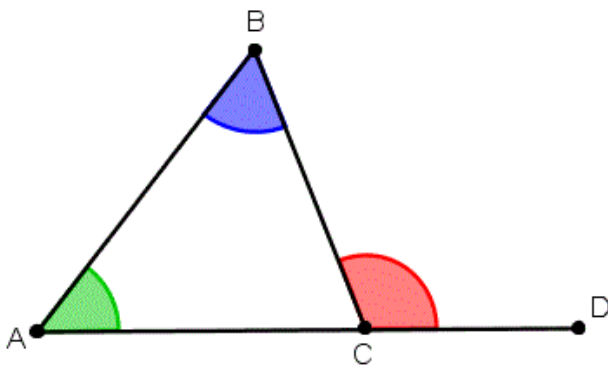
- perpendicular line through a point outside of a line



4. Find area of the below figures:



5. Replace stars by digits in the number 21^*53^* to make it divisible by 45 [hint: remember divisibility rule by 9?].
6. Name the angles and prove that $\text{RED} = \text{GREEN} + \text{BLUE}$. You may or may not need additional constructions.



7. On a separate piece of paper prepare the problem on operations with powers. We will mix all in hat and randomly draw.
Example

$$\frac{6^6}{2^2 \cdot 3^3} = 2^? \cdot 3^?$$