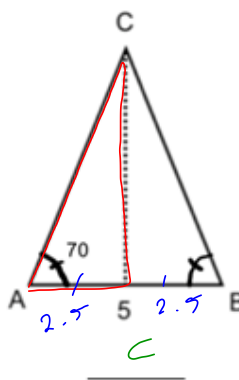
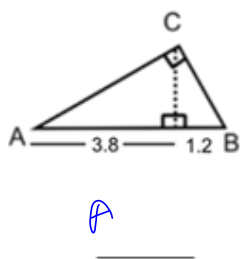
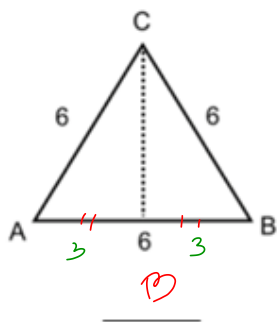


LESSON 8 – THINK-PAIR-SHARE

Question 1:

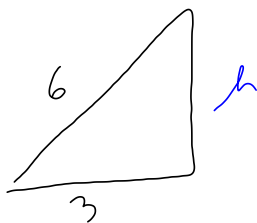
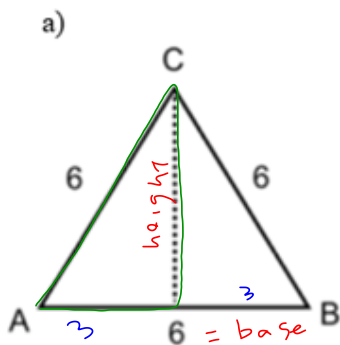
Part A: Match the following statements with only one of the below triangles:

- a) The altitude/height can be found using principle 11. — right
- b) The height can be found using Pythagoras theorem.
- c) The altitude can found using $\tan \theta = \frac{opp}{adj}$



Recall: Area of a triangle: $A = \frac{b \times h}{2}$, where b is the base of triangle and h the height.

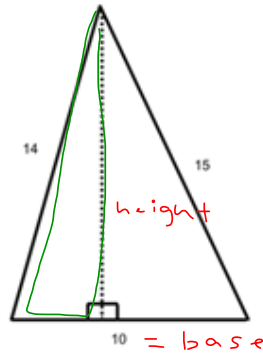
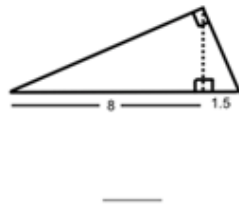
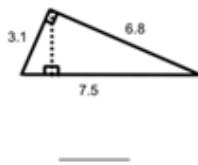
Part B: Find the altitudes/heights of the previous triangle (pictured below) and then find the area of each of the triangles.

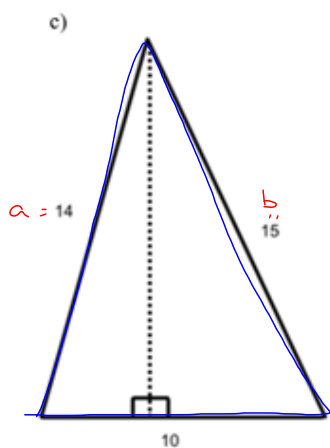


Question 2:

Part A: Match the following statements with only one of the below triangles:

- a) The height can be found using principle 11.
- b) The altitude can be found using principle 12.
- c) The height cannot be found with learnt tools. Must use principle 9 to find area.





Finding Area for any Triangle

P 9 Heron's formula

$$A = \sqrt{P(P-a)(P-b)(P-c)}$$

where a/b/c → side lengths

P → 1/2 the perimeter

step i. Find Perimeter
(addition of all sides)

$$P = 10 + 14 + 15$$

$$P = 39$$

$$P = \frac{39}{2}$$

$$P = 19.5$$

step ii label and formula

$$A = \sqrt{P(P-a)(P-b)(P-c)}$$

$$A = \sqrt{(19.5)(19.5-14)(19.5-15)(19.5-10)}$$

$$A \approx 67.7 \text{ unit}^2$$

P 151
#5 - #6

Hmwk: P 154-155
#8 - #10