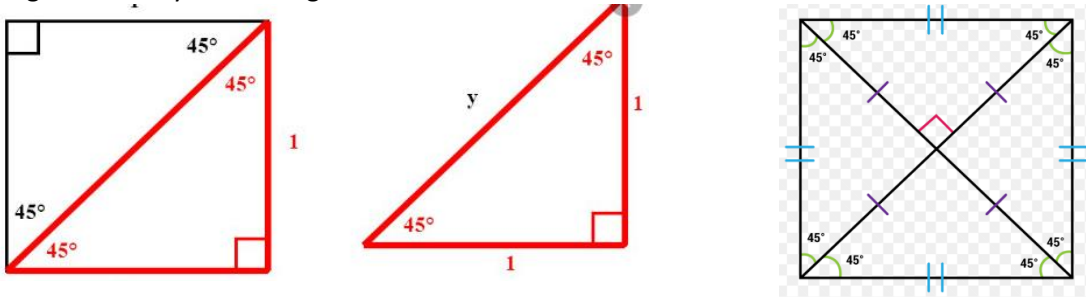


Monday 08.06.20

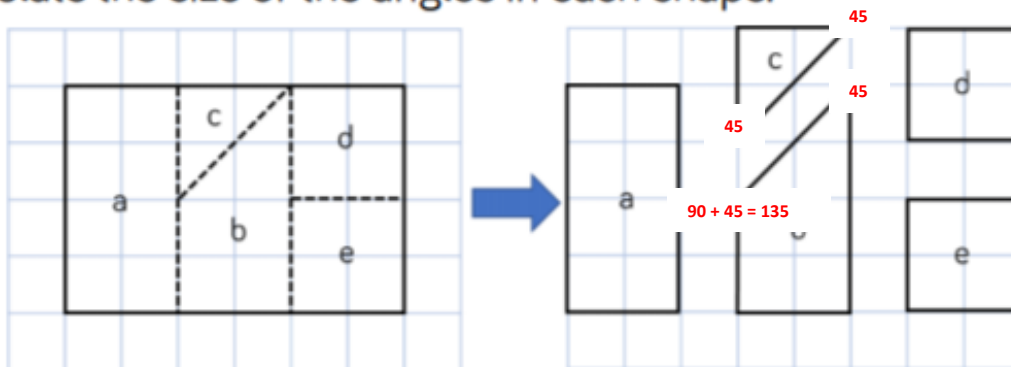
WALT: Calculating Angles - **Answers**

Remember that half a 90 degree angle (a Right Angle) is 45 degrees. If you draw a diagonal line through a square the angle will always be 45 degrees:



1)

Calculate the size of the angles in each shape.

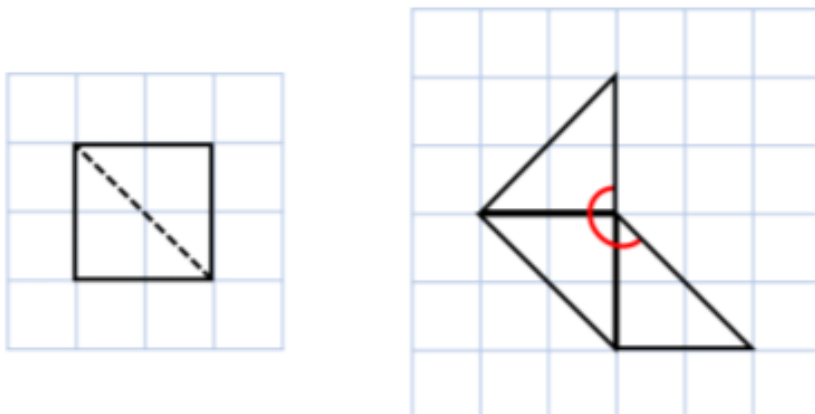


What's the same? What's different?

a, d and e all have 90 degree angles

2)

Here is a square cut into two triangles.

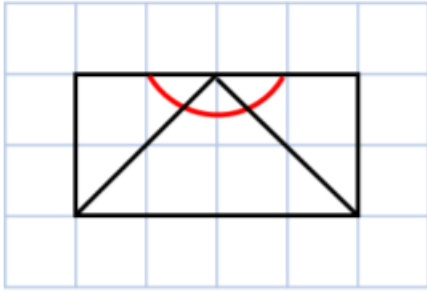


Use the square to calculate the size of the angle.

$90 + 90 + 45 = 225$ degrees

3) Reasoning and Problem solving

Whitney is calculating the missing angles in the shape.



She says,



The missing angles are 60 degrees because $180 \div 3 = 60$

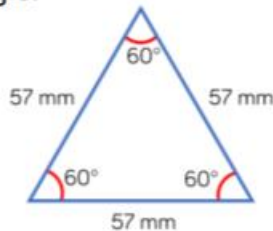
Do you agree?
Explain why.

Whitney is wrong. The angles are not equal.

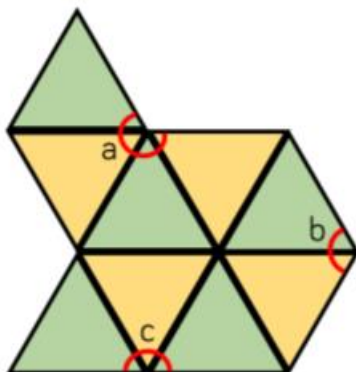
The angles will be worth 45° , 90° and 45° because the line shows a square being split in half diagonally. This means 90° has been divided by 2.

4)

Alex has this triangle.



She makes this composite shape using triangles identical to the one above.



- Calculate the perimeter of the shape.
 - Calculate the missing angles.
- Use your own triangle, square or rectangle to make a similar problem?

Perimeter = $57 \times 9 = 513 \text{ mm}$

$a = 60 \times 4$

$a = 240^\circ$

$b = 60 \times 2$

$b = 120^\circ$

$c = 60 \times 3$

$c = 180^\circ$