1.      Set $A = \{a, h, k, 4, 7, 9\}$, set $B = \{4, a, 9, l, p, 7\}$

Write the set $C = A \cap B$,   and the set $D = A \cup B$

Show on Venn's Diagram

2.      Find x, y and z, which satisfy all three relations below?

$$x + x = 8$$
$$x - y = 1$$
$$y + y = z$$

3.      On a straight line 4 points are marked. Point C is located between points A and B. Point D is located between points C and B. Which segment is shorter:
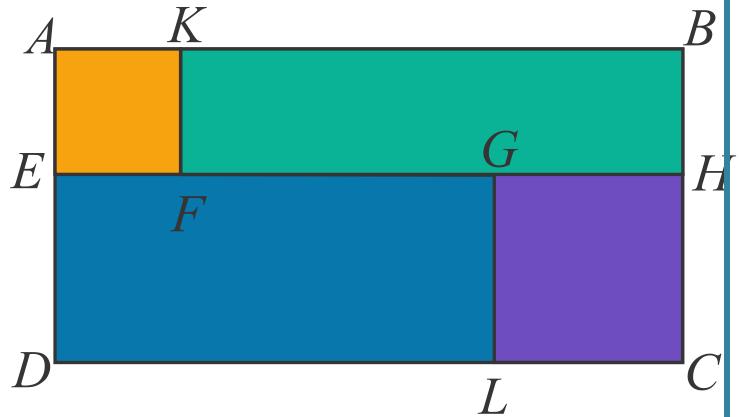
a.   AB or CD?

b.   AD or AC?

c.   CD or CB?

4.      Simplify expressions:

a.      x + 5 - 2x - 7 + 6x + 24 -15=

b.      3y - 5x - 8 + 23 + 45x - 6y + 7x + 23y +99=

5. Find the area of the rectangle ABCD, if area of square AKFE is 4cm², area of the square LGHC is 9cm², points E, F, G, H are on the same straight line, length of the segment FG is 5cm.

6. S16 is a set of multiples of 16 less than 100. S12 is a set of multiples of 12 less than 100.Write a definition for each of these sets using curly brackets { }; Draw Venn diagram for S12 and S16.

7. Make an auxiliary **drawing** to construct an **equation** needed to solve a word problem:

Four friends, Pichu, Pikachu, Tepig, and Oshawott went trick or treating. Oshawott collected 50 more candies than Pichu, Pikachu collected 50 less candies than Pichu, and Tepig got 2 times more candies than Pichu. When they put all candies in one jar, the number was 250.   *How many candies each one collected?*

8. Cut each square on a picture below (trace with colored pencils instead of cutting) into 4 equal parts/shapes so that each part/shape gets one "X".

|   |   |   |   |
|---|---|---|---|
|   |   |   |   |
|   | X | X |   |
|   | X | X |   |
|   |   |   |   |

| X |   |   |   |
|---|---|---|---|
|   | X |   |   |
|   |   | X |   |
|   |   |   | X |

|   |   |   |   |
|---|---|---|---|
|   |   | X |   |
| X | X | X |   |
|   |   |   |   |

9.  Find all natural numbers such that upon division by 7 they give equal quotient and remainder.