

### Homework #3.



Due on October 15, 2017

1. Mark with color pencil

a. Line  $\overleftrightarrow{AB}$



b. Line segment  $\overline{AB}$



c. Ray  $\overrightarrow{AB}$



d. Ray  $\overrightarrow{BA}$



2. Draw all possible positions of a circle and a straight line on a plane. How many common points can the circle and the line have? (To draw circles, use compass, to draw lines always use ruler!)

3. Draw the line  $a$  and mark points A, B, C, D, K on the line  $a$  so that

a. Point C belongs to the segment  $\overline{AB}$ ;

b. Point D belongs to the ray  $\overrightarrow{AB}$  and doesn't belong to the segment  $\overline{AB}$ ;

c. Point K belongs to the ray  $\overrightarrow{BA}$  and doesn't belong to the segment  $\overline{AB}$ ;

4. Match the name with its picture

1. Point

2. Line segment

3. Line

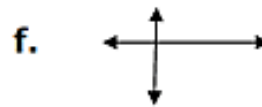
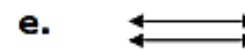
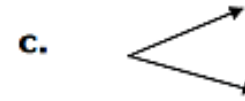
4. Ray

5. Parallel lines

6. Perpendicular lines

7. Angle

8. Midpoint



5. Solve the following equations:

a.  $3z - 11 = 16$

b.  $62 + 2y + 5 = 81$

c.  $101 - 4x = 21$

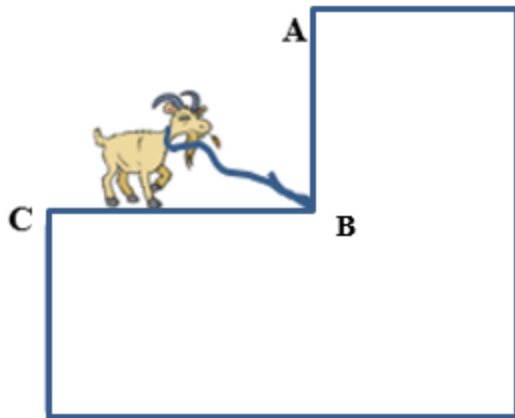
d.  $2x - 23 = 21$

e.  $26 + 3y = 5$

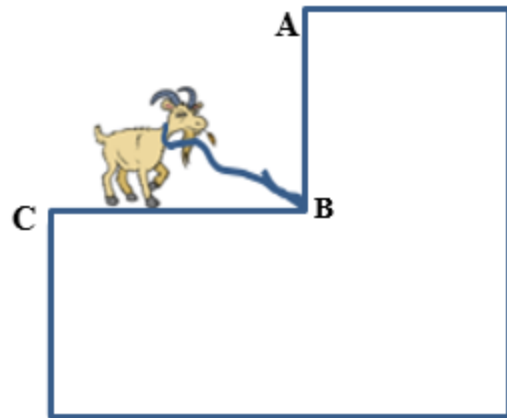
f.  $4z + 7 = 39$

**\*6. A goat is tied to a stake in the corner of a building with a 5-yard-long rope. What shape it will graze if the lengths of the walls are as follows:**

1.  $AB = 6$  yards and  $BC = 7$  yards



2.  $AB = 4$  yards and  $BC = 5$  yards



**7. Simplify:**

a)  $1\text{ m} + 8\text{ m} - 5\text{ m} =$

b)  $6x + 2x + 9x - 12 =$

c)  $7x + 3 - 5x + 7 =$

d)  $3 + 9x + 2xy - 4x =$

e)  $3yz - 2z + 5yz + 8y =$

f)  $34a - 10a + 8b - 2b + 2ab =$