Towheed Iranian School

(International Section)

Second Term, Final Exams, 2015-2016

Mark
_____
30

Subject: Mathematics (Geometry) **Date: 28/5/2016**

Name: _____ Grade: 7 , Section: A D

Exam time: 90 min

1-Write an equation in slope-intercept form for the line that satisfies the condition that

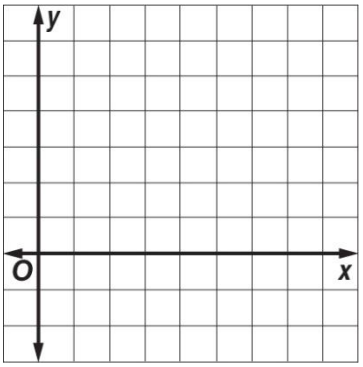
it has $m = -9$, y-intercept $= 3$. _____ (1 mark)

2- Find the value of x and BC if B is between A and C AC = 4x-12, AB = x, and BC = 2x+3. (2 marks)

3-Determine the slope of the line that contains the points $V(-10, -4)$, $W(5, 5)$. (2 marks)

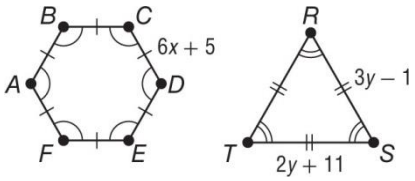
4-Graph the line that satisfies the given condition. (1mark)

slope = 4 and passes through (6, 2).



5- Use the polygons at the right to answer the questions given below. (2marks)

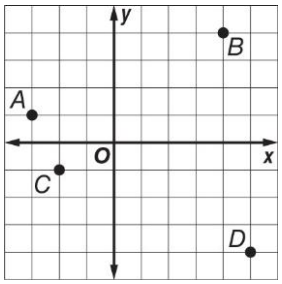
a) . Name polygon ABCDEF by its sides. Then classify it as convex or concave and regular or not regular.



b) Find the length of each side of polygon RST.

6- Use the coordinate grid to answer the questions below.
First write the cordinates for given points on the grid. Then (2 marks)

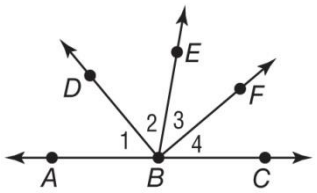
a) Find the distance between A and B.



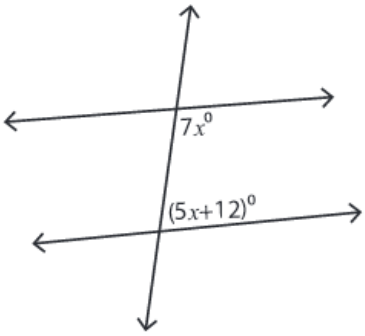
b) Find the coordinates of the midpoint of $\overline{CD}$.

7- In the figure $\overrightarrow{BA}$ and $\overrightarrow{BC}$ are opposite rays. $\overrightarrow{BF}$ bisects <CBE (2 marks)

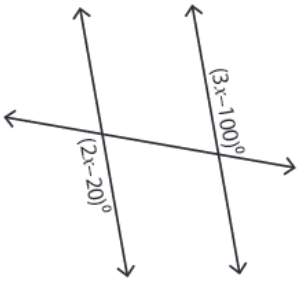
If m<3 = 4x + 10 and m<4 = 5x, find m<4.



8-Find the value of 'x' in the given figures below.Show working. (3 marks)



$x =$_____

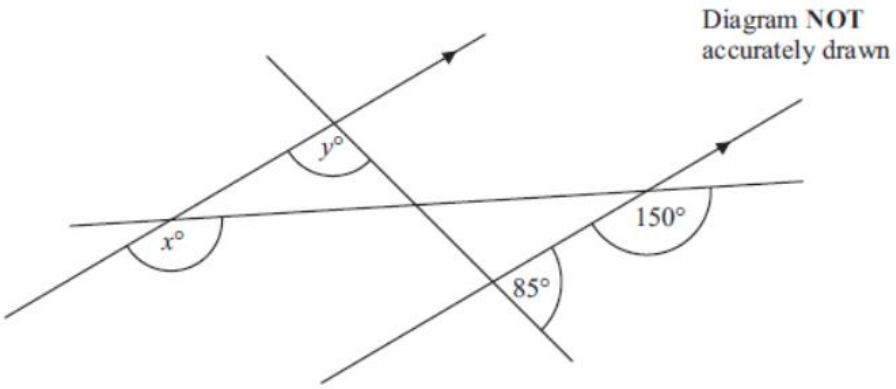


$x =$_____

9-Determine whether $\overleftrightarrow{MN}$ and $\overleftrightarrow{RS}$ are *parallel, perpendicular,* or *neither.* (2 marks)

Given that $M(-1, 3)$, $N(0, 5)$, $R(2, 1)$, $S(6, -1)$

10- Find the measure of each angle.Tell which postulate(s) or theorem(s) you used. (3 marks)



(a)i)Find the value of x .....

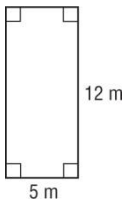
.

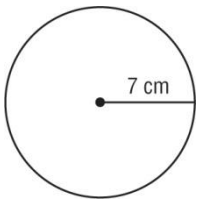
ii)Give reasons for your answer. .....

(b)i)Find the value of y

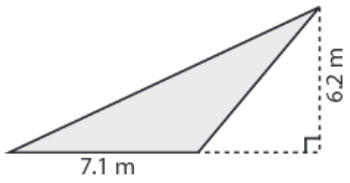
ii)Give reasons for your answer. .....

11- Find the perimeter or circumference of each figure. (3 marks)



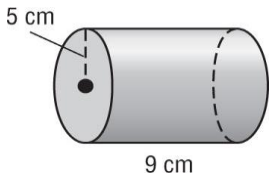


12- Find the area of each figure (2 marks)



13- Problemsolving:

a) Find the volume of the given cylinder. (2marks)



b) Find the dimensions of a rectangle whose length is 3 more than twice its width and has a perimeter of 30 centimeters. (2marks)

c) A highway on-ramp rises 15 feet for every 100 horizontal feet traveled. What is the slope of the ramp? (1mark)