Towheed Iranian School

(International Section)

First Term, Final Exams, 2015-2016

Mark
_____
50

Subject: Mathematics **Date: 12/12/2015**

Name: _____ Grade: 8 , Section: A D

Exam time: 80 min

TRANSLATE THE GIVEN SENTENCE INTO AN EQAUATION (1 mark)

The sum of three times a number a and four is the same as five times a - _____

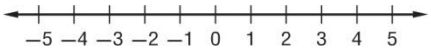
EVALUATE: $|4t + n|$ if $t = -2$ and $n = 5$. (2 marks)

SOLVE EACH EQUATION: (6 marks)

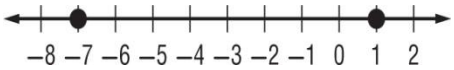
a) $6(3a + 1) - 30 = 3(2a - 4)$	b) $\frac{2}{5}x + 6 = \frac{2}{3}x + 10$	c) $\frac{5v-2}{10} = \frac{4}{5}$

SOLVE EACH EQUATION. THEN GRAPH THE SOLUTION SET. (3 marks)

$|2z - 9| = 1$



WRITE AN EQUATION INVOLVING ABSOLUTE VALUE FOR EACH GRAPH (1 mark)



FIND THE PERCENT OF CHANGE. **original: 80** **new: 64** (2 marks)

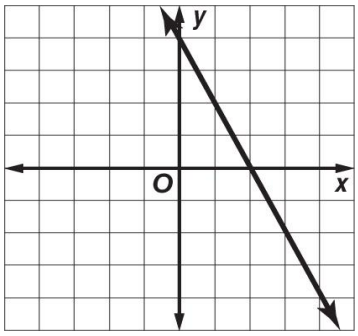
DETERMINE WHETHER EACH EQUATION IS A LINEAR EQUATION. WRITE YES OR NO. IF YES, WRITE THE EQUATION IN STANDARD FORM. (3 marks)

a) $y = -7 + 6x$ b) $y = 3x^2 + 1$

_____ _____

_____ _____

FIND THE X- INTERCEPT ,Y-INTERCEPT AND SLOPE OF EACH LINEAR FUNCTION. (3 marks)



X- INTERCEPT _____ Y-INTERCEPT _____ SLOPE _____

What is the y-intercept when $3x - 2y = -6$ is graphed? (1 mark)

_____

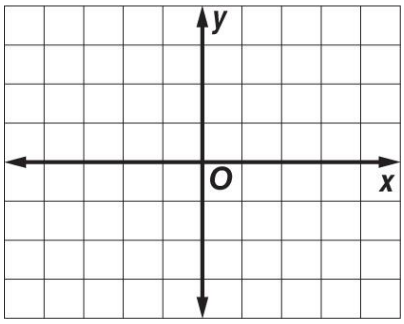
FIND THE VALUE OF R SO THE LINE THAT PASSES THROUGH EACH PAIR OF POINTS HAS THE GIVEN SLOPE. (2 marks)

$(r, 3), (5, 9), m = 2$

SUPPOSE Y VARIES DIRECTLY AS X. WRITE A DIRECT VARIATION EQUATION THAT RELATES X AND Y. THEN SOLVE. (2marks)

If $y = 64$ when $x = 32$, find x when $y = 100$.

GRAPH 2x + y = –2 BY MAKING A TABLE.ON THE GIVEN GRAPH. (3marks)



WRITE AN EQUATION FOR THE *NTH TERM* OF EACH ARITHMETIC SEQUENCE. (2 marks)

9, 13, 17, 21, . . .

PROBLEMSOLVING (any 4) (8 marks)

Twelve decrease by twice a number equals -34. Write an equation for this situation and then find the number.

Find 3 consecutive odd integers with a sum of 75.

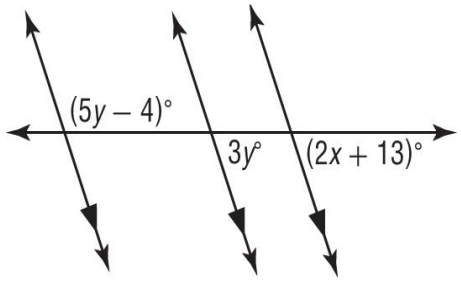
At Wellington High School, 3 out of every 8 students are athletes. If there are 1,280 student in the school how many are not athletes.

Kirk wants to purchase a wide-screen TV. He sees an advertisement for a TV that was originally priced at $3,200 and is 20% off. find the discounted price of the TV.

A daily newspaper had 12,125 subscribers when it began publication. Five years later it had 10,100 subscribers. What is the average yearly rate of change in the number of subscribers for the five-year period?

FIND THE VALUE OF THE VARIABLE(S) IN EACH FIGURE. EXPLAIN YOUR REASONING.

(3 marks)



WRITE AN EQUATION IN POINT-SLOPE FORM OF THE LINE WITH SLOPE $-\frac{3}{4}$ THAT CONTAINS (8, 1). THEN WRITE IT IN STANDARD FORM (3 marks)

POINT-SLOPE FORM -_____

STANDARD FORM - _____

WRITE AN EQUATION IN SLOPE INTERCEPT FORM FOR A LINE CONTAINING (3, 2) THAT IS PERPENDICULAR TO THE LINE $\mathbf{y = -2x + 6}$ (2 marks)

GRAPH THE LINE THAT THAT PASSES THROUGH A(3, -4) , PARALLEL TO LINE BC WITH B(2, 4) AND C(5, 6) (Hint: find slope first) (3 marks)