BELLEVILLE HIGH SCHOOL

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BELLEVILLE, NEW JERSEY 07109
WEB-SITE: www.bellevilleschools.org

"Strive, Achieve, Succeed"

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June 22, 2018

Dear Parents/Guardians and Students:

As a result of the implementation of the New Jersey Student Learning Standards (NJSLS), academic standards have become more rigorous and we would like our students to be able to demonstrate and communicate an in-depth understanding of the topics taught in mathematics. Our goal is not only to have the students master a particular skill, but also to be able to apply these skills in real-life situations.

In the summer time, many necessary mathematical skills are lost due to the absence of daily exposure. The loss of skills may result in a lack of success and unnecessary frustration for students as they begin the new school year. The purpose of this math assignment is to set the stage for instruction for the 2018-2019 school year.

For this reason, a summer packet has been prepared for all current eighth, ninth, tenth, and eleventh graders entering the following classes in September:

1. Algebra 1
2. Geometry A and H
3. Algebra 2 A and H
4. Pre-calculus A and H
5. Statistics A and H

Students can access the summer packets for their scheduled course at the Belleville school district's website: www.bellevilleschools.org. Packets can be downloaded and printed out. Work can be done neatly in the packet, with answers clearly labeled. Students may also attach their work, if they choose to do the problems from the packet on separate sheets of paper. Problems must be numbered, all work must be included, and answers must be labeled. If you are unable to access an Internet connection, a limited number of copies will be available at the main office in Belleville High School. Students may also visit the Belleville Public Library to utilize their computers.

The summer assignment will be collected on Thursday, September 6, 2018 and assessed as a quiz grade based on the level of completion. The first week of instruction will be dedicated to covering prerequisite skills required for each course as found in the packet.

Each packet reviews the necessary foundational skills for the course and is accompanied by a study guide that includes both relevant notes and completed examples. Additional help could be found at www.khanacademy.org and https://www.bellevillelearningacademy.com/ . Khan Academy is a free website for learning academic and real-world knowledge from tutorial videos. It is a great resource where you could find videos and examples from basic algebra through calculus. The Belleville Learning Academy provides student created content specific educational tutorials for peers.

Thank you very much for your support and cooperation. We look forward to working with you next year!

Sincerely,
The Belleville High School Mathematics Department

FOR ALL STUDENTS GOING INTO ALGEBRA 1

2018-2019

PRACTICE PROBLEMS

Algebra I Summer Packet Table of Contents

Part 1a Integer Operations Addition and Subtraction (6)

$3 + (-7) =$	$-13 + 20 =$
$-17 + (-6) =$	$9 - (-2) =$
$-8 - 6 =$	$-13 - (-9) =$

Part 1b Integer Operations Multiplication and Division (6)

4 x (-6) =	(-7) x 2 =
(-12) x (-5) =	70 ÷ (-5) =
(-12) ÷ 4 =	(-36) ÷ (-4) =

Part 2 Order of Operations (6)

$24 - 9 \cdot 2 + 6 \div 3$	$12 + 4^2$
$4(9 - 3) \div (8 - 2)$	$26 - [\,(25 - 11) - 2^3]$
$35 - (17 - 2) \div 5$	$(8^2 - 2^5) \div (24 \div 6) + 3^2$

Part 3. Evaluate Expressions (6)

Given $a = 5$, $b = 12$, $c = 2$ Evaluate $a + b + 2c$	Given: $a = 5$, $b = -12$, $c = 2$ Evaluate $b^2 - 4a$
Given: $a = 5$, $b = -12$, $c = 2$ Evaluate $ac + 2ab$	Given $x = -3$ Evaluate $3x^2$
Given: $s = -11$ and $v = 8$. Evaluate $(sv)^2$	Given: $a = -10$ and $b = 6$ $5ab \div 2$

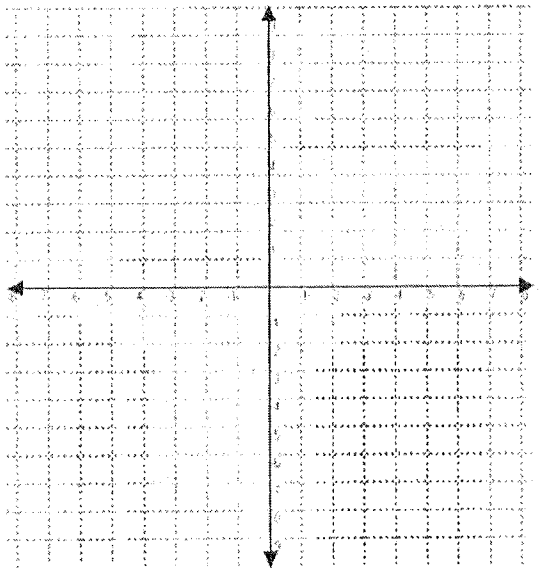
Part 4 Combining Like Terms (6)

$7x + 5 - 3x$	$6x + 4 + 15 - 7x$
$6w^2 + 11w + 8w^2 - 15w$	$11ab - 12ab + 5a - 2a$
$4(7x - 8) + 6(5x + 10)$	$10(8x + 7) - 8(10x - 9)$

Part 5 Plotting Points (4)

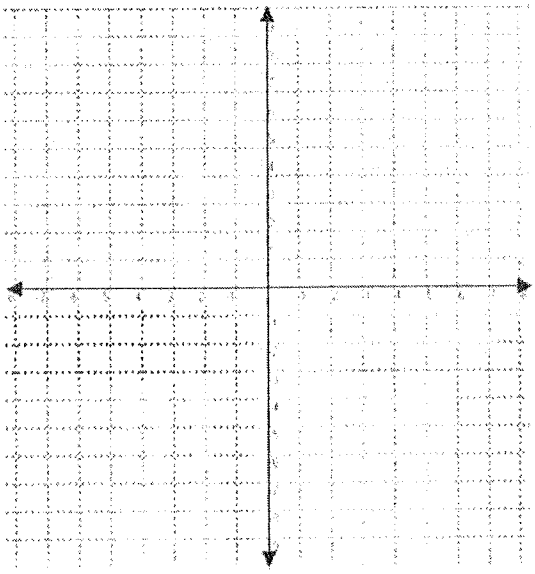
Plot the given ordered pairs.
(Label with the designated letter)

A(3, -5) B(0, 2)
C(-1, -4) D(-6, 0)
E(1, 3) F(-3, 1)



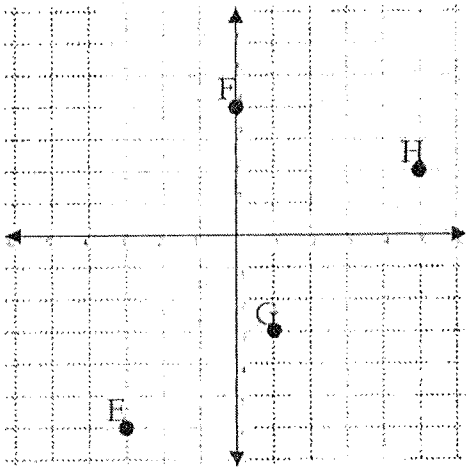
Plot the given ordered pairs.
(Label with the designated letter)

G(5, -2) H(6, -2)
I(-2, 3) J(4, 0)
K(-3, 3) L(0, -5)



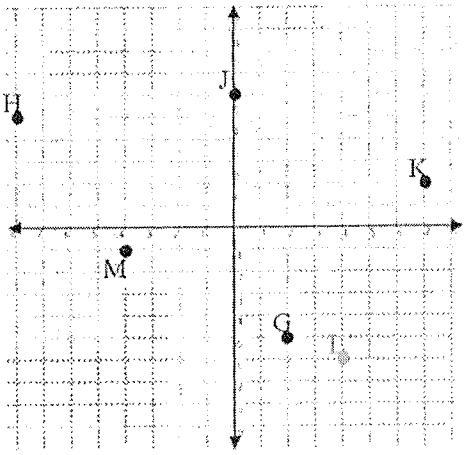
Using the coordinate grid given, write the ordered pairs for each point.

E(,) F(,)
G(,) H(,)



Using the coordinate grid given, write the ordered pairs for each point.

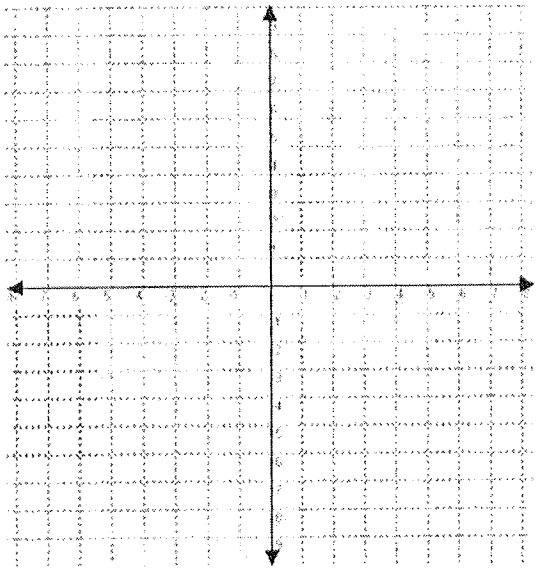
G(,) H(,)
J(,) K(,)
L(,) M(,)



Part 6 Graph Using Table of Values (2)

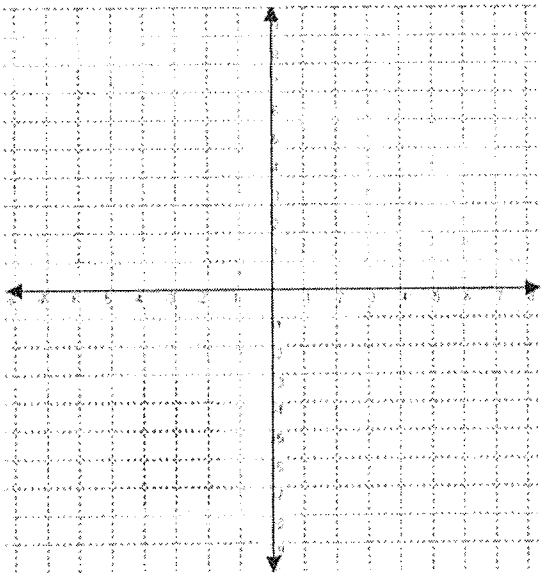
Graph y = 2x + 4 using a table.

x	y = 2x + 4	y	(x, y)



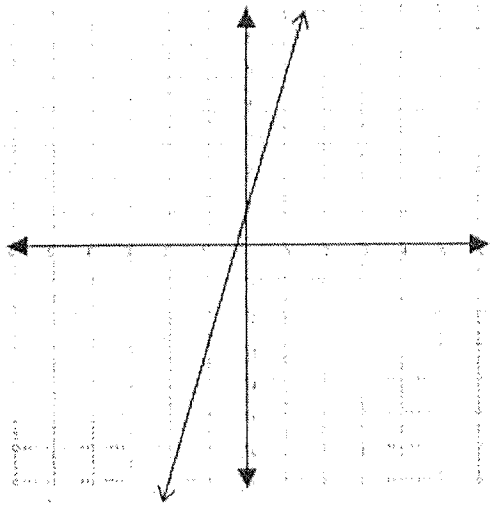
Graph y = -x + 2 using a table.

x	y = -x + 2	y	(x, y)



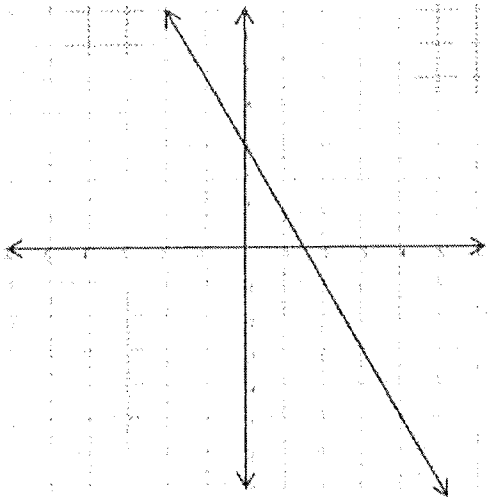
Part 7a Finding Slope Given Graph (4)

Find slope



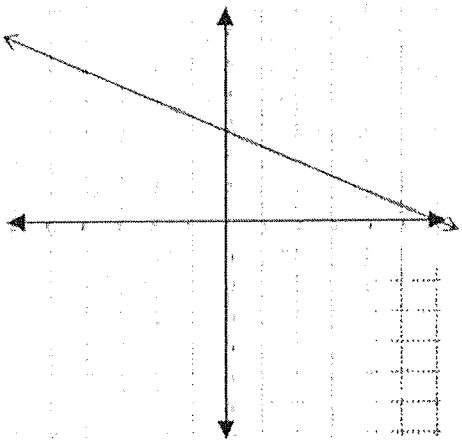
Slope: _____

Find slope



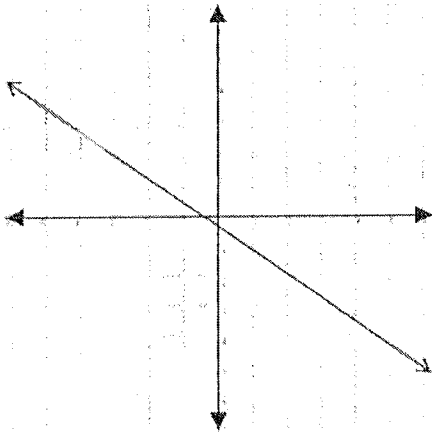
Slope: _____

Find Slope



Slope: _____

Find Slope



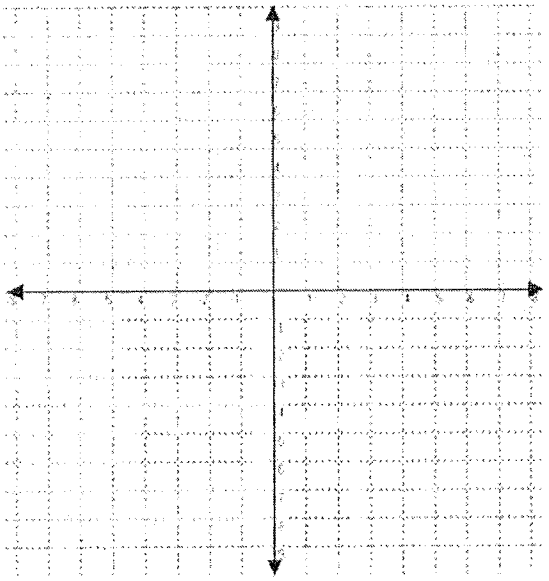
Slope: _____

Part 7b Find Slope Given two Points (4)

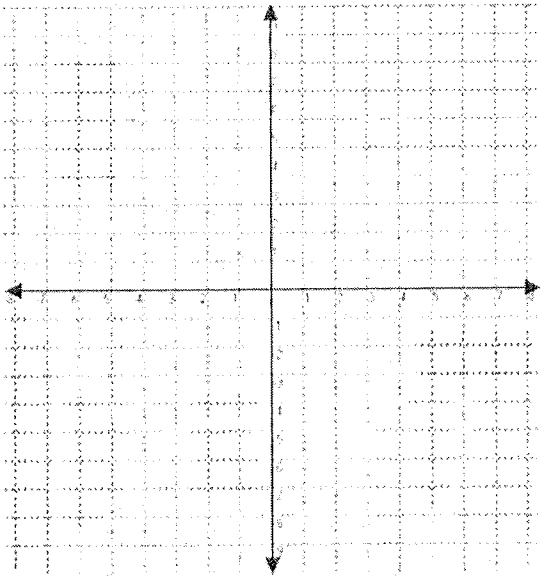
(1, 2) and (7, 9)	(6, 2) and (6, -5)
(5, -1) and (0, 3)	(-3, -7) and (-8, -1)

Part 8 Graphing Given Slope Intercept Form (4)

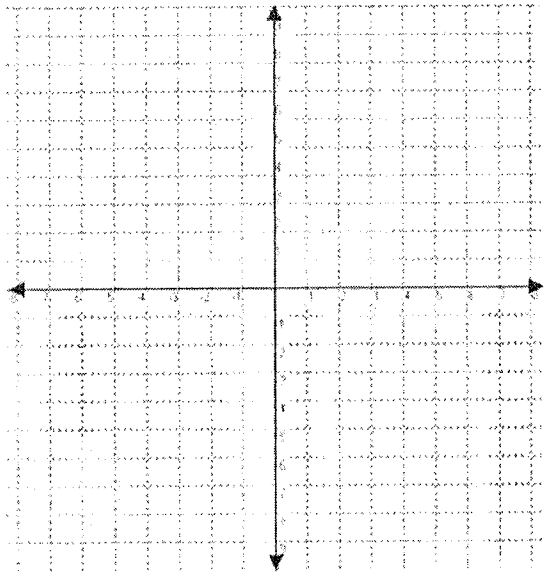
$y = \frac{1}{2}x + 3$



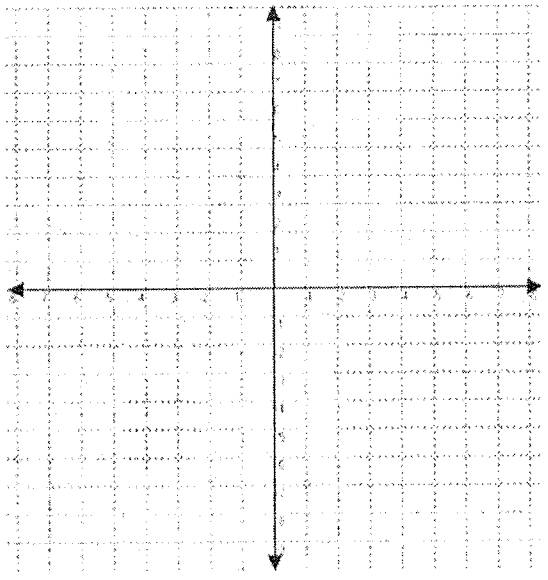
$y = -\frac{4}{3}x + 2$



$y = 2x - 4$



$y = -3x + 1$



Part 9a Solving One Step Equations (4)

$z - 5 = 19$	$9 + x = 16$
$3x = 12$	$\frac{x}{5} = 4$

Part 9b Solving Two Step Equations (4)

$5x + 3 = 23$	$3a - 14 = 4$
$\frac{x}{3} + 5 = 25$	$-7t + 1 = 50$

Part 9c Solving Multi Step Equations (4)

$7x + 5 - 3x = 17$	$9(x + 4) = 63$
$3(8 + g) - 15 = 24$	$\frac{3x+5}{4} = 8$