Algebra I **Name**_____

Summer Assignment Worksheet

Turn this portion in on the first day of class

Part 1 #1-30

Add

1. $23.1 + 9.81 =$ _____
2. $20 + (-7) =$ _____
3. $-15 + 6 =$ _____
4. $-5.6 + (-30.7) =$ _____
5. $\frac{5}{6} + \frac{2}{3} =$ _____

Subtract

6. $-9 - 22 =$ _____
7. $18.4 - (-3.2) =$ _____
8. $\frac{1}{2} - 2 =$ _____
9. $\frac{11}{12} - \frac{3}{4} =$ _____
10. $-15 - (-3) =$ _____

Multiply

11. $11(-8) =$ _____
12. $-15(-2) =$ _____
13. $\frac{2}{15} \cdot 2\frac{1}{2} =$ _____
14. $\frac{1}{2} \cdot \frac{4}{9} =$ _____
15. $2.4(-0.7) =$ _____

Divide

16. $63 \div (-9) =$ _____
17. $-22 \div 11 =$ _____
18. $-40.5 \div (-8.1) =$ _____
19. $\frac{2}{21} \div \frac{1}{3} =$ _____
20. $\frac{6}{25} \div (-\frac{3}{5}) =$ _____

Exponents

21. $3^2 =$ _____

22. $2^{-3} =$ _____

23. $1^2 =$ _____

24. $5^0 =$ _____

25. $4^{1/2} =$ _____

Radicals

26. $\sqrt{25} =$ _____

27. $\sqrt[3]{8} =$ _____

28. $\sqrt[4]{81} =$ _____

Store a value as x

29. If we solved the following equation:

$$-3x - 7 + 56x + 1 = 100$$

and got $x = 1$ as the answer then we need to check that it is in fact the correct solution.

Store $1\ as\ x$ in the calculator and type in the original equation.

Does it equal 100? _____

Therefor is $x = 1$ the solution? _____

Is $x = 2$ the solution? _____

Entering Equations

30. Enter the following equation into Y_1

$$Y_1 = 2x - 3$$

To graph push: zoom, 6:ZStandard

Push: 2nd, trace/calc, 1:value

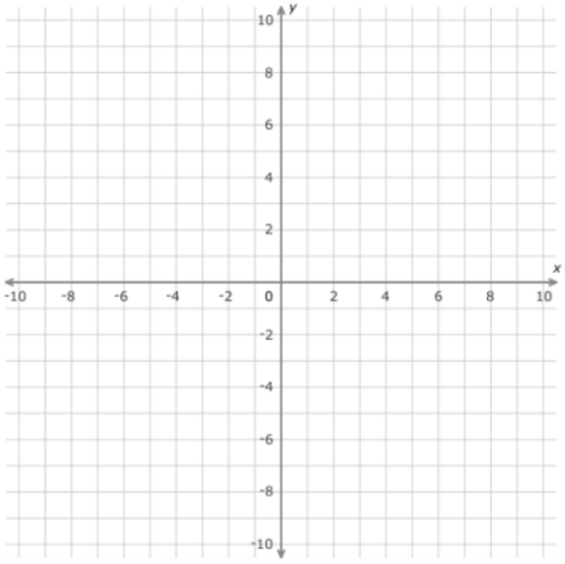
Enter an x-value between -10 and 10

$x =$ ____ $y =$ ____

Repeat: Enter another x-value between -10 and 10

$x =$ ____ $y =$ ____

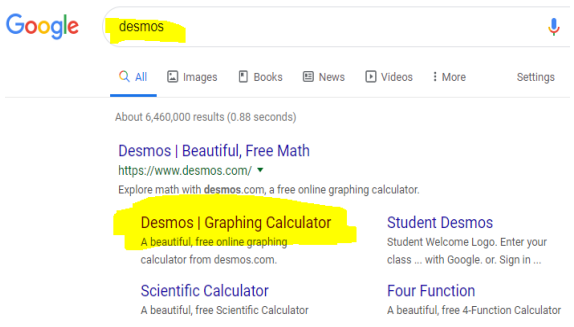
Graph the two points below and connect them to make the line



Pull up the table and fill in the x-y chart

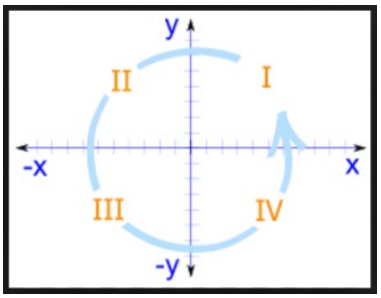
x	y
-1	
0	
1	
2	

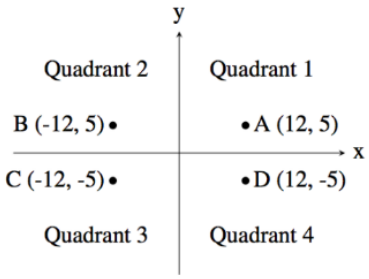
Part 2: Activity 1 & 2

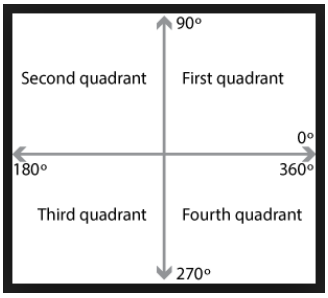
Go to:	Or:
https://www.desmos.com/calculator	

Activity 1

- ☐ Plot a point in all four quadrants on the graph





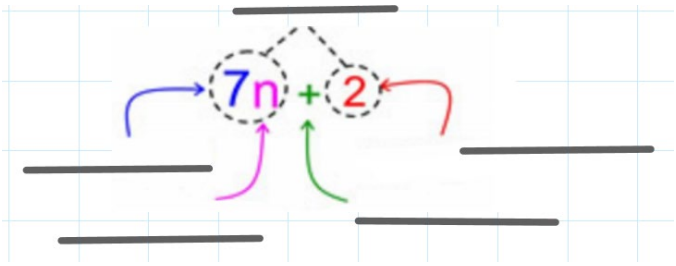


Activity 2

- ☐ Type in: $y = mx + b$
- ☐ Add all sliders
- ☐ Restrict m to be between -1 and 1 with $step = 1$
- ☐ Restrict b to be between -5 and 5 with $step = 1$
- ☐ Play the m slider and watch what it does to the line
- ☐ Play the b slider and watch what it does to the line

Part 3: #31-35, A-Z

31. Fill in the blanks



Identify all parts of the equation or expression

32. $x + 3$

Equation or Expression?	_____
Terms (2)	_____
Coefficient	_____
Variable	_____
Constant	_____

34. $13x + 7y - 18z = 100$

Equation or Expression?	_____
Terms	_____
Coefficient	_____
Variable	_____
Constant	_____

33. $-5a + 2 = 10$

Equation or Expression?	_____
Terms (3)	_____
Coefficient	_____
Variable	_____
Constant	_____

35. $\frac{1}{2}x - 1$

Equation or Expression?	_____
Terms	_____
Coefficient	_____
Variable	_____
Constant	_____

For A-Z:Answer the questions about the one step equations.

If the number suggested is not the solution, find it.

A) Is 5 a solution to -3x = 15 ??	B) Is 2 a solution to $\frac{x}{3} = 6$??	C) Is 8 a solution to $\frac{3}{4}x = 6$??
D) Is 2 a solution to x – 5 = -7 ??	E) Is 2 a solution to $\frac{x}{4} = 8$??	F) Is 12 a solution to $\frac{3}{4}x = 9$??
G) Is 8 a solution to x – 5 = -3 ??	H) Is 3 a solution to $\frac{x}{3} = 9$??	J) Is 9 a solution to $\frac{2}{3}x = 6$??
K) Is 6 a solution to x – 1 = -7 ??	L) Is 50 a solution to $\frac{x}{5} = 10$??	M) Is 10 a solution to $\frac{3}{5}x = 6$??

N) Is -4 a solution to $x - 3 = -7$??	O) Is 1 a solution to $\frac{x}{6} = 6$??	P) Is 25 a solution to $\frac{2}{5}x = 10$??
Q) Is 3 a solution to $-4x = 12$??	R) Is 3 a solution to $\frac{x}{4} = 12$??	S) Is 9 a solution to $\frac{3}{4}x = 12$??
T) Is 6 a solution to $-2x = 12$??	U) Is 18 a solution to $\frac{x}{3} = 6$??	V) Is 9 a solution to $\frac{2}{3}x = 6$??
W) Is 10 a solution to $x - 3 = -7$??	X) Is 48 a solution to $\frac{x}{4} = 12$??	Z) Is 12 a solution to $\frac{3}{4}x = 6$??