

Final Review

Units 3 & 4

I. Solving Linear Equations

- _____ both sides of the equation first.
 - distribute, combine like terms if needed.
- _____ by performing inverse operations.
 - Always undo addition/subtraction first, then multiplication/division.

* Examples: Solve.

$$\frac{x}{4} = -12$$

$$\frac{1}{3}x - 1 = -1$$

$$10 - 1.4x = 38$$

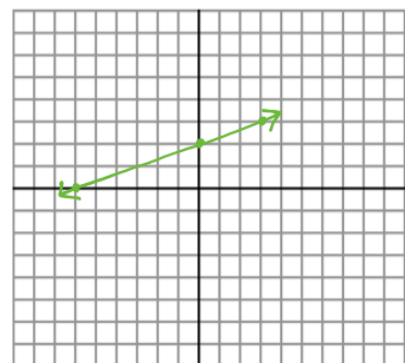
$$10 - 2x = 3x - 10$$

II. Writing Linear Equations

- Calculate the _____ of the line ($\frac{\Delta y}{\Delta x}$).
- Find the y-intercept (where _____).
- Write in _____ if the line passes through the origin or _____ form if it does not.

* Examples: Write the linear equation.

x	0	3	6	9	12
y	20	16	12	8	4



Directions: For items #1-12 you must

- Solve each equation.
- Show ALL WORK to solve the equation.
- If there is no solution or infinitely many solutions, state this.

1. $\frac{y}{-2} = 14$

2. $42 + z = 10$

Solution: _____

Solution: _____

3. $\frac{5}{8}y - 5 = 20$

4. $3 - 1.2a = 27$

Solution: _____

Solution: _____

5. $-10 - a = 15$

6. $6 = a - 4a + 3a$

Solution: _____

Solution: _____

7. $-6(z + 4) = -12$

Solution: _____

8. $6 + 2(x - 4) = 20$

Solution: _____

9. $-1 - 4z = -5z - 10$

Solution: _____

10. $1 + 3x = 6x - 20$

Solution: _____

11. $5(y + 2) = 5y - 11 - 3y$

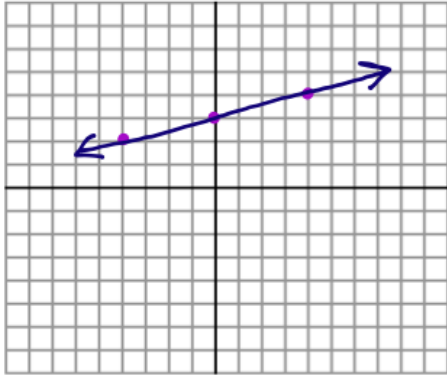
Solution: _____

12. $12 + 5x + x = 6(x + 2)$

Solution: _____

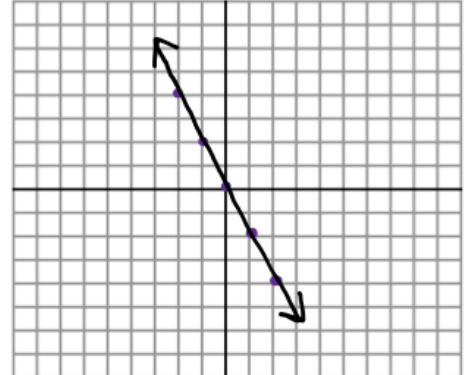
Directions: Write the equations of the following linear relationships.

13)



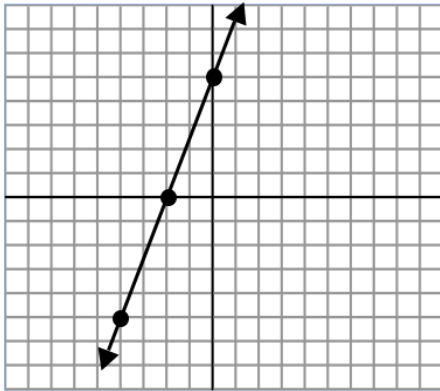
Equation _____

14)



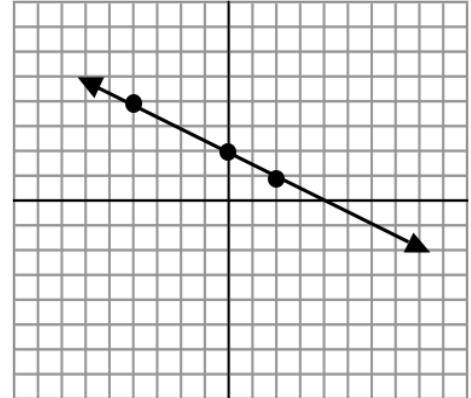
Equation _____

15)



Equation _____

16)



Equation _____

17)

x	8	6	4	2	0
y	-4	-1	2	5	8

Equation _____

18)

x	y
2	3
4	11
6	19
8	27
10	35

Equation _____

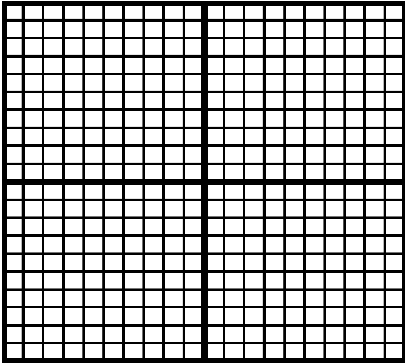
19)

X	-25	-20	-15	-10	-5
y	0	6	12	18	24

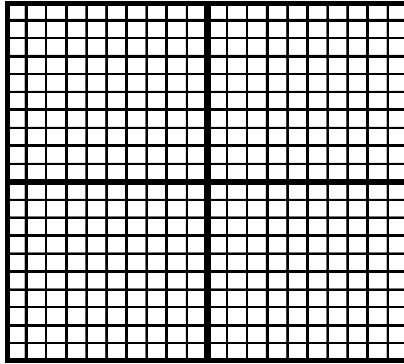
Equation _____

Directions: Graph each line. Plot as many points as possible on the given coordinate plane.

20) $y = x - 4$



21) $y = -\frac{2}{5}x + 2$



22) $y = 3x - 7$

