

Essential Questions:**Standard Form****3 Forms of Linear Equations:**

Slope-Intercept Form:

Point-Slope Form:

Standard Form:

**** To be in standard form the A value must be _____

Re-write each equation in standard form. *Remember: the A value must be a whole number (that means it's positive!!!)

a) $y = -3x + 4$

b) $y = 2x - 5$

c) $2y = -5x + 2$

d) $\frac{2}{3}x - y = 5$

e) $y = \frac{1}{2}x - 3$

f) $y - 5 = 3(x + 2)$

Fill in the table.

<u>Slope-Intercept</u>	<u>Point-Slope</u>	<u>Standard</u>
$y = -2x + 3$	xxxxxxxxxx	
	xxxxxxxxxx	$2x - 3y = 12$
	$y - 9 = 3(x + 1)$	
	$y + 2 = 4(x - 2)$	

Two lines are parallel if _____

Examples: Find an equation of the line parallel to the given equation that goes through the given point. *Write your answer in **slope-intercept form** AND **standard form**.*

1. $y = 4x - 7$; (2,6)

2. $y - 4 = 2(x + 5)$; (-1, 1)

3. $y = 3x - 1$; (-3, -5)

Slope – Intercept Form:

Standard Form:

Slope – Intercept Form:

Standard Form:

Slope – Intercept Form:

Standard Form:

Perpendicular Lines

Two lines are perpendicular if _____

Examples: Find an equation of the line perpendicular to the given equation that goes through the given point. *Write your answer in **slope-intercept form** AND **standard form**.*

1. $y = 4x + 2$; (4,-2)

2. $y = 4x - 7$; (4, 3)

3. $y = 2x + 3$; (4, -5)

Slope – Intercept Form:

Standard Form:

Slope – Intercept Form:

Standard Form:

Slope – Intercept Form:

Standard Form:

Word Problems

- 1) Mary can purchase Vinca plants for \$1.20 per plant. Phlox is on sale for \$2.50 per plant. Write an equation in standard form that models the possible combinations of vinca and phlox plants Mary can buy for \$300. List three of these possible combinations.



- 2) A snack mix requires a total of 120 oz. of some corn cereal and some wheat cereal. Corn cereal comes in 12 oz. boxes.
- The last time you made this mix, you used 5 boxes of corn cereal and 4 boxes of wheat cereal. How many oz. are in a box of wheat cereal?
 - Write an equation in standard form that models the possible combinations of boxes of wheat and corn cereal you can use.
 - List all possible combination of whole boxes of wheat and corn cereal you can use to make the snack mix.

