## Week 16: 11/30-12/4 Math I Due: 12/7

## Objectives:

1. To write and graph linear equations using point-slope form.
2. To graph linear equations using intercepts.
3. To graph linear equations in standard form.
4. To determine whether lines are parallel, perpendicular, or neither.
5. To write equations of parallel and perpendicular lines.

## Monday:

In Class:
Section 3-4: #1-8
Task #1 Lines 1 and 2 of City Project
Homework:
Section 3-4: #9-18
Go to text website: www.pearsonsuccessnet.com
Click on section 3-5 and WATCH online problems 1-5 and complete "Got It's" that follow.
THESE WILL BE CHECKED ON TUESDAY AND POINTS WILL BE DEUDCTED IF NOT COMPLETE.

## Tuesday:

In Class:
Section 3-5: #1-10
Task #1 Line 3 of City Project
Homework:
Section 3-5: #11-17

## Wednesday:

Go to text website: www.pearsonsuccessnet.com
Click on section 3-6 and WATCH online problems 1-4 and complete "Got It's" that follow.
THESE WILL BE CHECKED THURSDAY AND POINTS WILL BE DEDUCTED IF NOT COMPLETE.

## Thursday:

In Class:
Section 3-6: #1-8
Task #1 Lines 4-7 of City Project
Homework:
Section 3-6: #9-13, 15-18

## Friday:

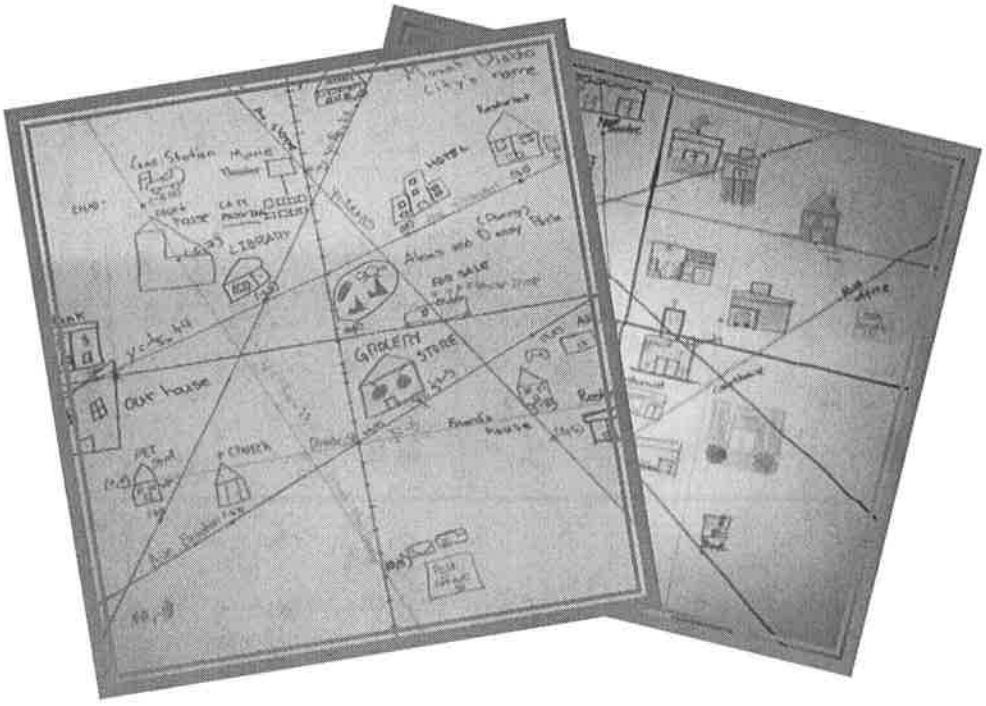
Finish Task #2 of City Project. (This is NOT the final draft, it is a rough draft)
The following will be checked on Monday:
1. All lines are labeled and colored
2. All ordered pairs are labeled
3. All buildings have been placed at the correct ordered pair

# Algebra Task

# Linear Equation City

# Poster Team Task

*w/ Guided Checklist Blackline Master*



*Together In Class

Period _____ Name _____ Date _____

# Algebra Linear Equations City Task (1)

## Task 1: Find and Graph the Seven Streets (Equations).

*You and your partner will each complete the equations page and practice graph. Draw each line accurately with a ruler. Label each line number on the graph.*

### Graph Line 1: (Main Street)

____ Graph the line formed from the two given points. (9, 7) (– 9, 1).

____ Find the street (equation in slope-intercept form). $m =$ _____ = _____ = ____

❖ **(Line 1) Main Street (Equation in Slope-Intercept Form): _____.**

### Graph Line 2:

____ Graph the line given the x and y-intercepts. *y*-intercept: 10 *x*-intercept: 5.

- *y*-intercept: (___, ___); *x*-intercept: (___, ___). $m =$ _____ = _____ = ____

____ Find the street (equation in standard form).

- *Hint: Start with point-slope form. Collect **variables** on the left and **constants** on the right.*

❖ **(Line 2) Street (Equation in Standard Form): _____.**

### Graph Line 3:

____ Graph the line given a point and the slope. (– 3, 3); m = $\frac{5}{3}$

- *Hint: Start with point-slope form and solve for y.*

____ Find the street (equation in point-slope form).

❖ **(Line 3) Street (Equation in Point-Slope Form): _____.**

### Line 4: Parallel to Line 1 :

____ Find the street (equation) of the **line parallel to line 1** and goes through the point: (9, – 2) *m* = _____

❖ **(Line 4) Street (Equation in Slope-Intercept Form): _____.**

____ Graph line 4, the street that is parallel to line 1.

*Together In Class

**Line 5: Perpendicular to Line 1 :**

____ Find the street (equation) of the **line perpendicular to line 1** and goes through the point: $(-3, -2)$ $m =$ ____

- **(Line 5) Street (Equation in Slope-Intercept Form):** _____.

____ Graph line 5, the street that is perpendicular to line 1.

**Graph Line 6:**

____ Graph the line that has an undefined slope.

- **(Line 6) Street (Equation):** $X = 10$.

**Graph Line 7:**

____ Graph the line that has a zero slope.

- **(Line 7) Street (Equation):** $Y = -13$.

**Label the following ordered pairs:**

____ (3, 5), (-12,0), (9, 7), (0, 10), (5,0), (8, -6), (-9, -7), (-3, 3), (3, 13), (0, -5), (9, -2), (-6, -7), (0, -11), (-7, 10), (-6, 7), (0, 0).

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## Task 2: Create your Linear Equation City Poster Final Draft

*You and your partner will create the final draft of your "Linear Equations City" poster together. Poster should be drawn accurately and labeled correctly.*

____With a ruler, draw the *x*-axis and *y*-axis on the poster. Trace the *x*-axis and *y*-axis in **black**.

____ In pencil, draw each street as accurately as possible and label line number.

____Outline each street in the correct color. **Line 1:** Dark Blue; **Line 2:** Dark Green; **Line 3:** Red; **Line 4:** Purple; **Line 5:** Orange; **Line 6:** Yellow; **Line 7:** Pink.

____ In pencil, draw each building as accurately as possible onto the streets on the poster.

____ **Line 1: (Equation):** _____. Hotel; (3, 5), Bank; (-12,0), Restaurant; (9, 7)

____ **Line 2: (Equation):** _____. Movie Theater; (0, 10), Flower Shop; (5,0), Restaurant; (8, -6)

____ **Line 3: (Equation):** _____. Pet Store; (-9, -7), Library; (-3, 3), School; (3, 13)

____ **Line 4: (Equation):** _____. Grocery Store; (0, -5), Arcade; (9,-2), Church (-6, -7)

____ **Line 5: (Equation):** _____. Post Office; (0, -11), Gas Station; (-7, 10), Courthouse; (-6, 7)

____ **Line 6: (Equation):** _____. Fire Station; (___, ___), Police Station; (___, ___)

____ **Line 7: (Equation):** _____. Your house; (___, ___), Your friend's House; (___, ___)

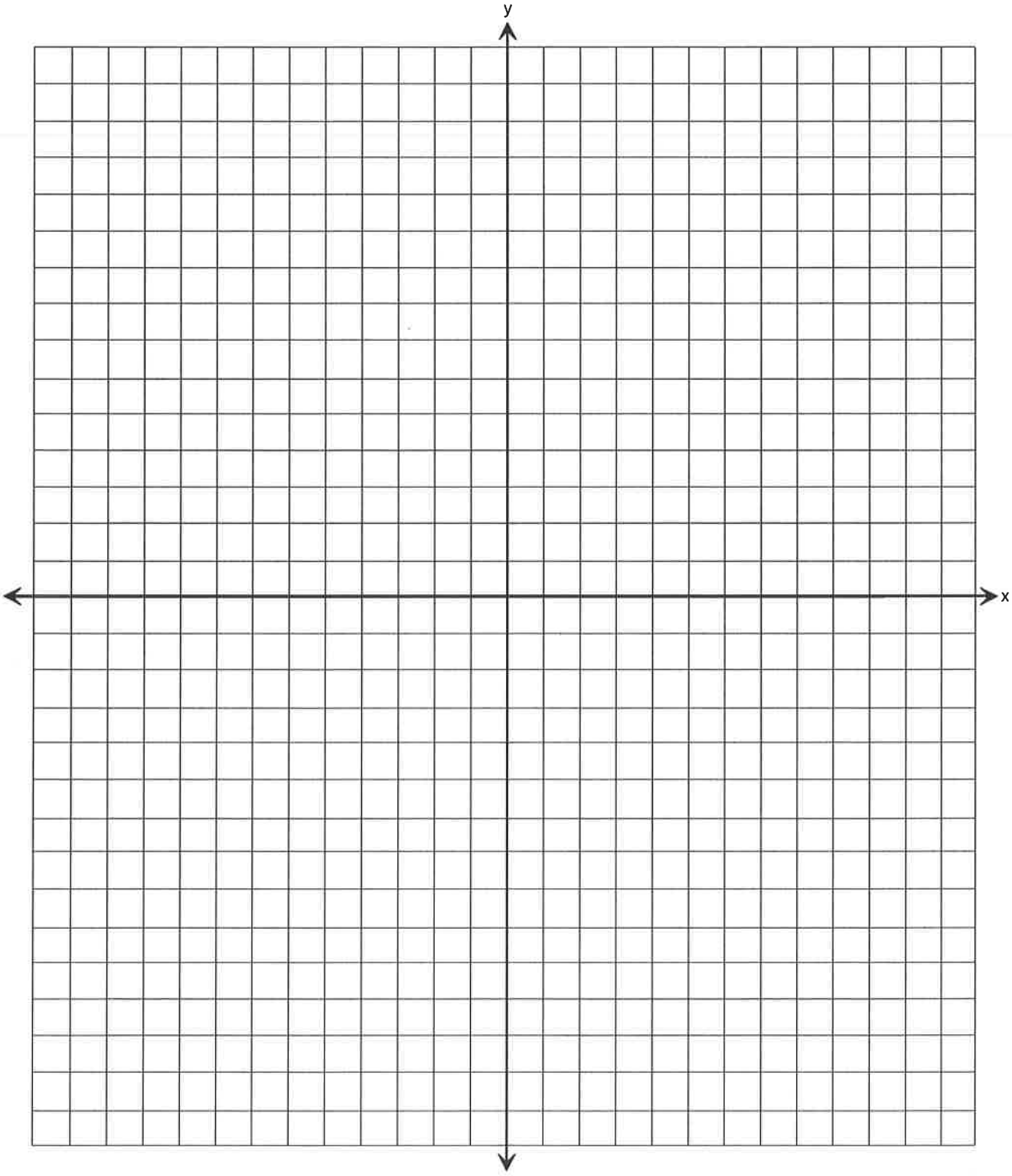
____Draw and name the city park at: (0, 0).

____Color and label and name all of the buildings,

____ Name the city, and label the streets (with the equations) and the ordered pairs of each building.

*(Project is worth 100 pts. 50 points for requirements and accuracy; 25 points for effort; 25 points for creativity)*

*Together In Class



* Independent

Period _____ Name _____ Date _____

# Algebra Linear Equations City Task (2)

## Task 1: Find and Graph the Seven Streets (Equations).

*You and your partner will each complete the equations page and practice graph. Draw each line accurately with a ruler. Label each line number on the graph.*

### Graph Line 1: (Main Street)

____ Graph the line formed from the two given points. (4, – 10) (– 8, – 1).

____ Find the street (equation in slope-intercept form). $m =$ _____ = _____ = ____

❖ **(Line 1) Main Street (Equation in Slope-Intercept Form): _____.**

### Graph Line 2:

____ Graph the line given the $x$ and $y$-intercepts. $y$-intercept: – 4 $x$-intercept: – 1.

- $y$-intercept: (___, ___); $x$-intercept: (___, ___). $m =$ _____ = _____ = ____

____ Find the street (equation in standard form).

- *Hint: Start with point-slope form. Collect **variables** on the left and **constants** on the right.*

❖ **(Line 2) Street (Equation in Standard Form): _____.**

### Graph Line 3:

____ Graph the line given a point and the slope. (– 3, 8); $m = \frac{2}{3}$

- *Hint: Start with point-slope form and solve for y.*

____ Find the street (equation in point-slope form).

❖ **(Line 3) Street (Equation in Point-Slope Form): _____.**

### Find Line 4: Parallel to Line 1 :

____ Find the street (equation) of the line **parallel to line 1** and goes through the point: (8, – 3) $m =$ _____

❖ **(Line 4) Street (Equation in Slope-Intercept Form): _____.**

____ Graph line 4, the street that is parallel to line 1.

* Independent

**Line 5: Perpendicular to Line 1 :**

____ Find the street (equation) of the line **perpendicular to line 1** and goes through the point: $(6, -4)$ $m =$ _____

- **(Line 5) Street (Equation in Slope-Intercept Form):** _____.

____ Graph line 5, the street that is perpendicular to line 1.

**Graph Line 6:**

____ Graph the line that has an undefined slope.

- **(Line 6) Street (Equation):** $X=11$.

**Graph Line 7:**

____ Graph the line that has a zero slope.

- **(Line 7) Street (Equation):** $Y=-13$.

**Label the following ordered pairs:**

____ (8, -13), (- 4, - 4), (-8, -1), (- 4, 12), (-1, 0), (0, - 4), (-9, 4), (0, 10), (6, 14), (-8, 9), (0, 3), (4, 0), (12, 4), (0, -12), (6, -4), (7, 7).

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## Task 2: Create your Linear Equation City Poster Final Draft

*You and your partner will create the final draft of your "Linear Equations City" poster together. Poster should be drawn accurately and labeled correctly.*

____With a ruler, draw the $x$-axis and $y$-axis on the poster. Trace the $x$-axis and $y$-axis in **black**.

____ In pencil, draw each street as accurately as possible and label line number.

____Outline each street in the correct color. **Line 1:** Dark Blue; **Line 2:** Dark Green; **Line 3:** Red; **Line 4:** Purple; **Line 5:** Orange; **Line 6:** Yellow; **Line 7:** Pink.

____ In pencil, draw each building as accurately as possible onto the streets on the poster.

____ **Line 1: (Equation):** _____. Bank; (8, -13), Hotel; (-4,-4), Restaurant; (-8, -1)

____ **Line 2: (Equation):** _____. Movie Theater; (-4, 12), Flower Shop; (-1, 0), Restaurant; (0, -4)

____ **Line 3: (Equation):** _____. Pet Store; (-9, 4), Library; (0, 10), School; (6, 14)

____ **Line 4: (Equation):** _____. Grocery Store; (-8, 9), Arcade; (0 ,3); Church (4, 0)

____ **Line 5: (Equation):** _____. Post Office; (12, 4), Gas Station; (0, -12), Courthouse; (6, -4)

____ **Line 6: (Equation):** _____. Fire Station; (___, ___), Police Station; (___, ___)

____ **Line 7: (Equation):** _____. Your house; (___, ___), Your friend's House; (___, ___)

____Draw and name the city park at: (7, 7).

____Color and label and name all of the buildings,

____ Name the city, and label the streets (with the equations) and the ordered pairs of each building.

*(Project is worth 100 pts. 50 points for requirements and accuracy; 25 points for effort; 25 points for creativity)*

* Task 2 Rough Draft
* Final will go on poster board