FINDING WAYS TO USE TECHNOLOGY TO ASSIST OUR STUDENTS WITH GRAPHING A VARIETY OF LINEAR EQUATIONS!!
PROJECT SUMMARY

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• this project involves Algebra students (Course I) working for exactly 15 days, covering 12 topics, homework given daily, 2 quiz’s, and an end of the project activity.
• the materials required for mastery in this unit are:
  * Green Globs and Graphing Equations
  * TI83 Plus Graphing Calculators
  * 2 Vernier Motion Detectors
  * Overhead Unit Projector
  * Spaghetti noodles
  * Two CBL Units
  * Computers
  * Rulers

*********************************************
Overview of the Unit

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<th>Day</th>
<th>Topic #</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Review ordered pairs on the coordinate graph</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Graph basic linear equations I.</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Determine if an equation is linear or not.</td>
</tr>
<tr>
<td>*</td>
<td>3</td>
<td>Collection of student work from topic 3.</td>
</tr>
<tr>
<td>4</td>
<td>4/5</td>
<td>Graph horizontal and vertical lines.</td>
</tr>
<tr>
<td>*</td>
<td>4/5</td>
<td>Collection of student work from topic 4/5.</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>Find slope using slope formula.</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Slope activity - spaghetti noodles.</td>
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<td>7</td>
<td>1-6</td>
<td>Quiz on the first six topics.</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>Use y = mx + b to find slope and y-intercept.</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
<td>Find equation of a line given slope and 1 point</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>Find an equation of a scatterplot.</td>
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<tr>
<td>11</td>
<td>10/11</td>
<td>Find slopes of parallel and perpendicular lines.</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>Solve a simple system of equations.</td>
</tr>
<tr>
<td>13</td>
<td>7-12</td>
<td>Quiz on the second six topics.</td>
</tr>
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<td>14</td>
<td>1-12</td>
<td>Green Globs and Graphing Equations.</td>
</tr>
<tr>
<td>15</td>
<td>1-12</td>
<td>Unit test.</td>
</tr>
</tbody>
</table>
RESOURCES

1) *I2T2 NOTEBOOK*

2) *UCSMP ALGEBRA*
   * Scott Foresman, Addison Wesley, 1998.

3) *PRINCIPLES and STANDARDS for SCHOOL MATHEMATICS*
   * NCTM, 2000.

4) *LEARNING STANDARDS and TECHNOLOGY*
   * SUNY State Education Department, 1996.

5) *EXPLORATIONS*
   * Real World Math with the CBL System, Texas Instruments, 1999*
ESSENTIAL QUESTIONS and STANDARDS

1. How do I find the coordinate of a point on the coordinate plane?
   NCTM - #2
   NYS - #1, 4

2. How do I graph an equation on the coordinate plane?
   NCTM - #2
   NYS - #1, 3, 4

3. What is a linear equation?
   NCTM - #2, 3
   NYS - #1, 4, 7

4/5. What does the equation of a horizontal/vertical line look like?
   NCTM - #2, 3, 10
   NYS - #1, 4

6. What is slope and how do I calculate it?
   NCTM - #1, 2, 9
   NYS - #1, 2, 3

6. What is the slope of spaghetti?
   NCTM - #1, 2, 9
   NYS - #1, 2, 3

7. What is the Slope-Intercept Property and what does it tell me about a line?
   NCTM - #2, 3, 9
   NYS - #1, 2, 3, 4, 6, 7

8. How can I find the equation of a line given its slope and a point on a line?
   NCTM - #2, 3, 9
   NYS - #2, 3, 4, 6, 7

9. What is a scatterplot and how do I find the equation of a line that closely fits it?
   NCTM - #2, 5, 9, 10
   NYS - #1, 4, 6, 7

10/11. How are the slopes of parallel lines related?
   How are the slopes of perpendicular lines related?
   NCTM - #1, 2, 3, 5, 6, 9, 10
   NYS - #1, 2, 4, 7

12. What is a point of intersection on a graph?
   NCTM - #2, 5, 6, 7, 9, 10
   NYS - #1, 2, 3, 4, 6, 7
TOPICS
1) ORDERED PAIRS
2) GRAPHING EQUATIONS I
3) GRAPHING EQUATIONS II
4) HORIZONTAL LINES
5) VERTICAL LINES
6) SLOPE
   "SPAGHETTI NOODLES"
   QUIZ
7) EQUATIONS & SLOPE
8) FIND THE EQUATION OF A LINE
9) SCATTER PLOTS
10) PARALLEL LINES
11) PERPENDICULAR LINES
12) SOLVING A SYSTEM
   QUIZ
   "GREEN GLOBS and GRAPHING EQUATIONS"

*************************************************
A) • The grid at the right is called the coordinate plane. We use it to graph ordered pairs.
  • The coordinate axes consist of the x-axis (horizontal/left or right) and the y-axis (vertical/up or down).
  • The Origin is where the two axis intersect. The point of intersection is labeled (0, 0).
  • The axes divide the plane into four quadrants (numbered counter clockwise). They start in the upper right hand corner (I, II, III, IV).

B) • The x-coordinate tells the distance right (positive) or left (negative).
  • The y-coordinate tells the distance up (positive) or down (negative).

C) • To plot a coordinate (x, y), you first move the x distance and then the y distance.

1) Write the ordered pair for each point.
   A(      ) B(      ) C(      ) D(      )

2) Graph the following ten points:
   a) (-3, 3) b) (0, 6) c) (-2, -2)
   d) (3, 0) e) (3, 7) f) (-1, -6)
   g) (0, -5) h) (-7, 0) i) (6, -4)
   j) (0, -7)

3) What Quadrant is the following pairs in?
   a) (-3, -3) b) (-4, 9) c) (2, 7) d) (5, -1)
1) Write down the ordered pair for each point given.
   A( , ) B( , ) C( , ) D( , )

2) Write down the ordered pair for each point given.
   A( , ) B( , ) C( , ) D( , ) E( , ) F( , )
**GRAPHING EQUATIONS I**

A) You must set up a table.  
Your x-value is first, followed by your equation, the y-value and your ordered pair.

- Choose small #'s for x-value (0, 1, 2, 3), then substitute into the equation and solve for y.
- Make your ordered pair, then graph the equation. Connect line.

Ex. Graph the equation $y = 2x + 1$

<table>
<thead>
<tr>
<th>x</th>
<th>y = 2x + 1</th>
<th>y</th>
<th>Ordered Pair</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>y = 2(0) + 1</td>
<td>1</td>
<td>(0, 1)</td>
</tr>
<tr>
<td>1</td>
<td>y = 2(1) + 1</td>
<td>3</td>
<td>(1, 3)</td>
</tr>
<tr>
<td>2</td>
<td>y = 2(2) + 1</td>
<td>5</td>
<td>(2, 5)</td>
</tr>
<tr>
<td>-1</td>
<td>y = 2(-1) + 1</td>
<td>-1</td>
<td>(-1, -1)</td>
</tr>
</tbody>
</table>

**TECHNOLOGY**

1) Graph the equation: $y = 2x + 1$.
   a) Type in equation ($Y =$). $Y_1 = 2x + 1$
   b) Set x, y min and max (WINDOW). -10 and 10
   c) Graph line (GRAPH).

2) Graph the equation: $y = -3x - 1$. (Same steps as above)
   a) Do the two lines intersect? At what point?

“Problem Solver”

* A pool has 2” of water in it. Water is being added at 3” per hour. Write an equation to represent the height in inches of the level of water in the pool by $y = 3x + 2$. Y is the height of the water in the pool and X is the time in hours.
* Find how high the water is in the pool after 0, 1, 2, and 3 hours. (Hint: set up a table, solve for y; graph using TI83+)

**GRAPHING EQUATIONS II**

A) All equations that we have graphed so far have been linear equations (straight lines).

- An equation is linear if the variables that occur are to the first power only, there are no products of variables and no variables are in the denominator.

Ex. Linear or not: a) $xy = 22$  
   b) $3x + 5y = 10$  
   c) $y = 3x^2$  
   d) $y = 3x^2$  

- Linear  
- Not Linear

Ex. Solve $4x - 2y = -2$

Solve for $y$: $x = 1 + 2x$, $y$
\[
\begin{align*}
4x - 2y &= -2 \\
-4x - 4x &= 0 \\
-2y &= -2 - 4x \\
y &= 1 + 2x
\end{align*}
\]

• Solve and graph these equations using your TI83+ calculators.

• Use the graph paper to illustrate the equation of a line.

1) \(-2x + 4y = 8\) 
2) \(-x + y = 3\)
3) \(-y = -3x - 3\) 
4) \(\frac{2x - 2y}{3} = -4\)

GRAPHING 3 LINES

• using your TI83+, graph the following three lines?

1) \(y = -4x + 3\) 
2) \(y = x + 3\) 
3) \(y = .5x + 3\)

Hints:

a) remember to type in all 3 lines (Y1=).
b) set your window (XminXmaxYminYmax).
c) construct graph (graph key).
d) check your data tables (2nd table).

Directions:

1) you must have three data tables.
2) you must use at least 4 values for x (one # a -#).
3) complete your graph paper in color.
   (1) blue  (2) red  (3) black
4) you must label all three lines.
5) At what point do all three lines intersect? ( , )

HORIZONTAL LINES

* the following numbers are the wind chill temps. in Degrees F_ at Buffalo’s airport one winter day in December of 1999.

<table>
<thead>
<tr>
<th>Time(x)</th>
<th>Temp(y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13_</td>
</tr>
<tr>
<td>3</td>
<td>13_</td>
</tr>
<tr>
<td>5</td>
<td>13_</td>
</tr>
</tbody>
</table>

• as you can see, for any value of x, we have y equal to 13_. Thus, the equation of the line is \(y = 13\).

• “Horizontal lines” have a graph of \(y = b\), where \(b\) is constant

NOTE: graph is always straight and parallel to the x-axis.

• Graph the following lines using your TI83+ calculators.
a) \( y = 7 \)  
b) \( y = -5 \)  
c) \( y = 3 \)

**VERTICAL LINES**

* the following is a grid of a city’s street #’s (north/south) and avenue #’s (east/west).

<table>
<thead>
<tr>
<th>Avenue(x)</th>
<th>Street(y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>11</td>
</tr>
</tbody>
</table>

• as you can see, for any value of y, we have \( x = 7 \). Thus the equation of the line is \( x = 7 \).

• “Vertical Lines” have a graph of \( x = a \), where \( a \) is a constant.

**NOTE:** graph is always straight and parallel to the y-axis.

• Graph the following lines using your TI83+ calculators.

  a) \( x = -7 \)  
b) \( x = 5 \)  
c) \( x = -3 \)

**GRAPHING HORIZONTAL & VERTICAL LINES**

• using your TI83+, graph the following lines?

  1. \( y = 2 \)
  2. \( y = -2 \)
  3. \( y = 4 \)
  4. \( y = -4 \)
  5. \( x = 4 \)
  6. \( x = -4 \)
  7. \( x = 1 \)
  8. \( x = -1 \)

**Hints:**

a) draw a horizontal line at \( y \) (2nd/draw/3:horizontal).

b) draw a vertical line at \( x \) (2nd/draw/4:vertical).

c) the # in front of the colon (:) is the line.

**Directions:**

1) use your graph paper to show your results.
1) GRAPH the following lines:
   a) \( y = 2 \)  
   b) \( y = -2 \)  
   c) \( y = 4 \)  
   d) \( y = -4 \)

2) Graph the following lines:
   a) \( x = 4 \)  
   b) \( x = -4 \)  
   c) \( x = 1 \)  
   d) \( x = -1 \)

3) Write the equation of these lines:
   a)  
   b)  
   c)  

---

*SLOPE OF A LINE*

* A window washer is 100 ft. high on a building. He begins to lower his scaffold at a rate of 10 ft. per second. This shows a rate of decrease is constant \((0, 100), (1, 90), (2, 80), (3, 70), (4, 60)\).*
A) the “slope of the line” is the ratio of the number of units the line rises or falls vertically (the rise) to the number of units the line moves horizontally from left to right (the run).

- the slope of a horizontal line is equal to zero.
- the slope of a vertical line is undefined since division by 0 is undefined.
- the slope of the line can be found by substituting the \((x, y)\) coordinates into the formula for slope.

\[
m = \frac{y_2 - y_1}{x_2 - x_1}
\]

Ex. a) \((-2, 3)\) and \((3, 5)\)

\[
m = \frac{5 - 3}{3 - (-2)} = \frac{2}{5}
\]

b) \((-1, 2)\) and \((-3, 5)\)

\[
m = \frac{5 - 2}{-3 - (-1)} = \frac{3}{-2}
\]
1) Find the slope of the line containing the points:
   a) (3, 1) and (4, 5)      b) (-3, 1) and (-2, -3)

2) Find the slope containing the given points:
   a) (-1, 2) and (2, 2).     b) (3, 2) and (3, 5).
   • after working out slope using the formula, plot and connect
   the points on the graph below to actually see the slope.

SLOPE ACTIVITY

WHAT IS THE SLOPE OF SPAGHETTI?

Procedure: Drop a piece of spaghetti onto a sheet of graph paper. Find the coordinates of two
points on the spaghetti. Use those points to calculate the slope. Repeat at least five times, turning the
angle of the spaghetti each time.

• set up a data table to record your results.

Materials: graph paper, spaghetti, rulers, paper.

<table>
<thead>
<tr>
<th>TRIAL POINT 1</th>
<th>POINT 2</th>
<th>SLOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUIZ-1

1. In what quadrant is the point (-2,4) located?
   a) I    b) II   c) III   d) IV
2. The point (3,-2) is a solution to which equation?
   a) y=2x-3    b) -2x+y=-8    c) 2x+y=8    d) y=-2x+3
3. Name the coordinates of the point given in the graph.
   a) (2,3)    b) (-2,-3)    c) (-2,3)    d) (2,-3)

4. What are the coordinates of the missing ordered pair?
   a) (1,4)    b) (1,8)    c) (1,6)    d) (1,5)

5. Which equation represents the graph in the picture?
   a) y=-2x+2    b) y=-2x-2 c) y=2x+2    d) y=2x-2

6. Which of the following is not a linear equation?
   a) xy=6    b) y=2x+4    c) 2x+3y=5    d) y=3
7. To solve for y in the equation -2x+2y=5, you have to?
   a) subtract 2x then divide by 2   b) add 2x then divide by 2
   c) add -2x then multiply by 2   d) subtract 2x then multiply by 2

8. What type of line is y=5?
   a) vertical   b) horizontal   c) parallel   d) perpendicular

9. Which of the following is a vertical line?
   a) y=3   b) y=2x   c) x=6   d) x=y

10. Find the slope of the line which contains (3,-2) and (5,-6)
    a) -2   b) -4   c) 4   d) 2

---

EQUATIONS AND SLOPE

A) • the line with equation \( y = mx + b \) has slope \( m \) and
   y-intercept \( b \) (Slope-Intercept Property).
   • If we substitute 0 in for \( x \) in the equation \( y = mx + b \), we get
     \( y = m(0) + b \) or \( y = b \). Thus the graph will cross the y-axis at the
     point \((0,b)\). For the equation \( y = x+2 \), \( m = 1 \) and \( b = 2 \). The graph
     crosses the y-axis at \((0,2)\) and has a slope equal to 1.

---

Ex. Find the slope and the y-intercept of these equations:
   a) \( y = -3x - 8 \)   b) \( y = 2x + 4 \)   c) \( y = -5x \)
   \((-3 \text{ and } -8) \)   \((2 \text{ and } 4) \)   \((-5 \text{ and } 0) \)

B) • writing an equation for a line with given slope and y-intercept,
substitute into slope equation $y = mx + b$ both the slope ($m$) and y-intercept ($b$). Graph the line using these two points.

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

Ex. Graph using y-intercept and slope.

$\text{m = -5/2} \quad \text{b = 5} \quad (0, 5) \quad (2, 0)$

**FIND THE EQUATION OF A LINE**

A) • to find an equation of a nonvertical line given one point and the slope, you would follow three steps:

1) substitute the slope for $m$ and the coordinate of the given point for $x$ and $y$ in the equation $y = mx + b$.

2) solve the equation from step 1 for $b$.

3) Substitute the slope for $m$ and the value you found for $b$ in $y = mx + b$.

Ex. Find the equation of a line that passes thru points (2, 6) and (-4, -6).

$m = \frac{-6 - 6}{-4 - 2} = \frac{-12}{6}$

$y = mx + b$

$y = 3x + b$

$1 = 3(2) + b$

$1 = 6 + b$

$-5 = b$

* thus the equation of the line is $y = 3x - 5$.

1) Write the equation of the line given the following graph.

• first find the slope using the two points. Then substitute into y-intercept property and solve for $b$. 
\[
m = \frac{-3 - 1}{-1 - 1} = \frac{-4}{-2} = 2
\]

\[y = mx + b \quad y = 2x + b\]
\[1 = 2(1) + b \quad 1 = 2 + b\]
\[-1 = b \quad \text{thus} \quad y = 2x - 1\] 

A) A graph in which individual points are plotted.

we want to try and make a best fit line for the data. First sketch a line that closely fits the data. Second, locate two points on the line (4, 60) and (7, 80). Then solve for \(m\) and then \(b\).

\[
m = \frac{80 - 60}{7 - 4} = \frac{20}{3} = 6.67
\]

\[y = mx + b \quad y = \frac{20}{3}x + b\]
\[
60 = (20/3)4 + b \quad 60 = 80/3 + b \\
100/3 = b \quad \text{thus } y = 20/3x + 100/3
\]

• below is a table showing the **median** height in cm. of boys in the USA by age.

<table>
<thead>
<tr>
<th>Age</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>138</td>
</tr>
<tr>
<td>11</td>
<td>143</td>
</tr>
<tr>
<td>12</td>
<td>150</td>
</tr>
<tr>
<td>13</td>
<td>160</td>
</tr>
<tr>
<td>14</td>
<td>163</td>
</tr>
<tr>
<td>15</td>
<td>169</td>
</tr>
<tr>
<td>16</td>
<td>174</td>
</tr>
<tr>
<td>17</td>
<td>176</td>
</tr>
<tr>
<td>18</td>
<td>177</td>
</tr>
</tbody>
</table>

1. Plot the points in the table (label the axis).
2. Draw a line to fit the data.
3. Find **two points** on your line and label them.
4. Use the two points and find the **slope**.
5. Use slope and one of your points to find the **y-intercept**.
6. Write an equation of a line using slope and y-intercept.
7. Rewrite your equation in **standard form**.
8. Use your equation to predict the height of a boy who is 19.
9. Use your equation to predict the age of a boy who is 140cm
10. **Check** your answers with your graph.
11. What type of numbers would not be appropriate to use for x, the age?

**PARALLEL LINES**

A) • Parallel lines are lines that never intersect. Two nonvertical lines are parallel if and only if they have the same slope.

\[
\begin{array}{c|c|c|c}
\text{Equation} & \text{Slope Intercept Form} & \text{Slope} \\
1) \ y = 2x + 5 & y = 2x + 5 & 2 \\
2) \ -2x + y = -2 & y = 2x - 2 & 2 \\
\end{array}
\]

* since the slopes are the **same**, the two lines are **parallel**.
PERPENDICULAR LINES

A) • two lines are perpendicular if the product of their slopes is -1.

Also, the two intersecting lines form right angles.

\[ y = 2x + 5 \]
\[ x + 2y = -2 \]

Equation Slope Intercept Form Slope
1) \[ y = 2x + 5 \] \[ y = 2x + 5 \] 2
2) \[ y = (-\frac{1}{2})x + 2 \] \[ y = (-\frac{1}{2})x + 2 \] (-1/2)

* since the product of the slopes is \(2(-\frac{1}{2}) = -1\), the two lines are **perpendicular**.

1) Determine if \( y = x + 1 \) and \( 2x + y = 3 \) are parallel?

• Graph the equations to check.

Equation Slope Intercept Form Slope
1) \[ y = x + 1 \] \[ y = x + 1 \] 1
2) \[ y = -2x + 3 \] \[ y = -2x + 3 \] -2

* since the slopes are **different**, the two lines are **not parallel**.

2) Determine if \( y = x + 2 \) and \( 4x + 2y = 4 \) are perpendicular.

• Graph the equations to check.

Equation Slope Intercept Form Slope
1) \[ y = 1x + 2 \] \[ y = 1x + 2 \] 1
2) \[ y = -2x + 2 \] \[ y = -2x + 2 \] -2

* since the product of the slopes \((1)(-2) = -1\), the two lines are **not perpendicular**.
A) • a system is a set of sentences joined by the word “and,” which together describe a single situation. We solve these by setting up the two equations, graph them and find the point of intersection (solution).

Ex. Jim worked twice as many hours as his sister Heather plus one more hour. Three times the number of hours Heather worked plus the amount of hours Jim worked equals six. (Hint: write out the data given, solve, then graph)

• Let y equal hours worked by Jim. Hours worked by Jim: y=2x+1
• Let x equal hours worked by heather. Hours worked by Heather: 3x+y=6
• Graph y=2x+1 Graph 3x+y=6
• The intersection of the two graphs is the solution.
• The point (1,3) is the solution.
• Jim worked 3 hours. Heather worked 1 hour.

• If the two lines intersect, their is one solution.
• If the two lines are parallel, there is no solution.
• If the two lines coincide, there are an infinite number of solutions.
1) Find all solutions to the system: \( y = 2x + 1 \) and \( y = 2x - 1 \).

2) The sum of two numbers is 18, and their difference is 8.
   a) Write the two equations.
   b) Graph both these equations and find the solution.

3) Find all solutions to the system: \( y = 2x + 4 \) and \( x + 2y = 3 \).
   a) What is the solution to the system?

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**QUIZ 2**

1. What is the slope of the equation \( y = 3x + 4 \)?
   a) 2   b) 4   c) 3   d) 1

2. What is the slope-intercept form of the equation \( 2x - y = 2 \)?
   a) \( y = 2x - 2 \)   b) \( y = -2x - 2 \)   c) \( y = 2x + 2 \)   d) \( y = -2x + 2 \)

3. What is the slope of \( 4x + 2y = 3 \)?
   a) 4   b) -2   c) 2   d) -4

4. Write the equation in slope-intercept form given a slope of 2 and passes through the
5. Find the equation in slope-intercept form that passes through the points (1,1) and (2,3).
   a) y = -2x+1   b) y = x+2   c) y = -x-2   d) y = 2x-1
6. The point (1,2) is a solution to which of the following equations?
   a) x = 2y-4   b) 2x+y = 4   c) -2x+y = 1   d) 3x+y = 2
7. This scatter plot defines what type of relation?
   a) negative   b) positive   c) neither   d) all three
8. Which line is parallel to 3x+y = 5
   a) y = -3x-12   b) y = x-4   c) y = 3x+5   d) y = -x-5
9. Given y = 2x+1, a line perpendicular to this equation must have a slope equal to?
   a) 1/2   b) 2   c) -2   d) -1/2
10. Which point is the solution to the set of equations in the following graph?
    a) (-2,-3)   b) (2,-3)   c) (2,3)   d) (-2,3)

GREEN GLOBS AND GRAPHING EQUATIONS

* Equation Plotter is a graphing tool, Green Globs challenge your graphing abilities in a game format, and Tracker tests knowledge in a game format at a more advanced level.

A) Linear Graphs
   • this option will test your ability to write equations for the graphs that are displayed.

B) Green Globs Game
   • this option will test your ability to hit as many globs as possible with a single equation.

C) Tracker
this option asks you to find equations for several hidden graphs.

GOOD LUCK!