

IT'S A LINEAR MATCH UP

Lesson Overview:

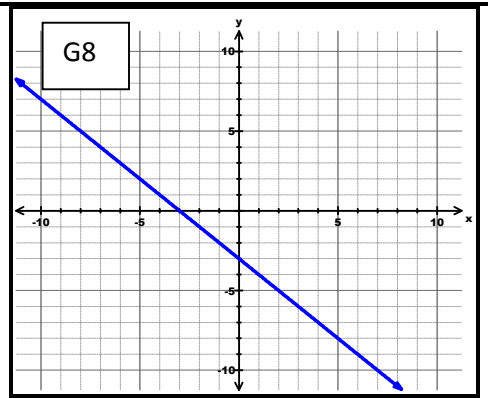
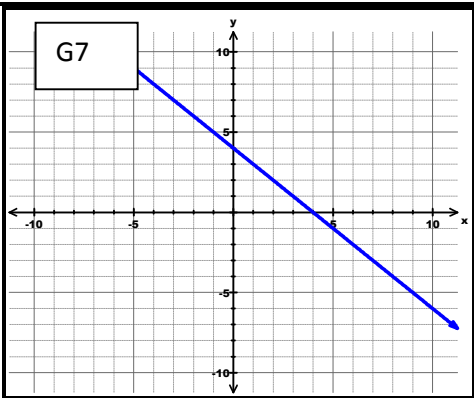
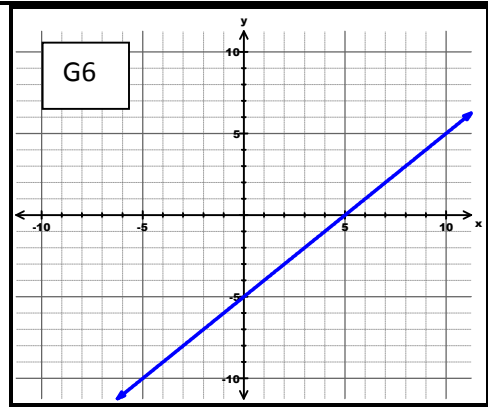
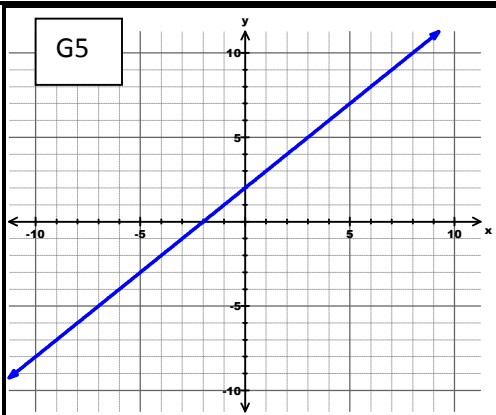
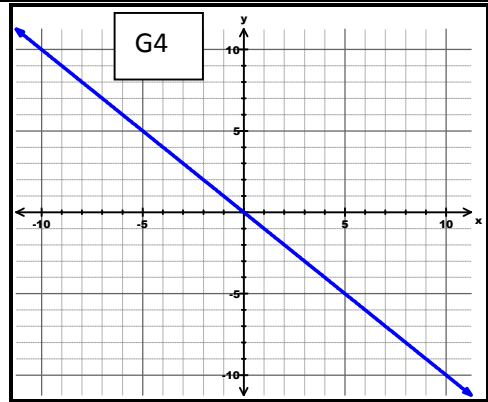
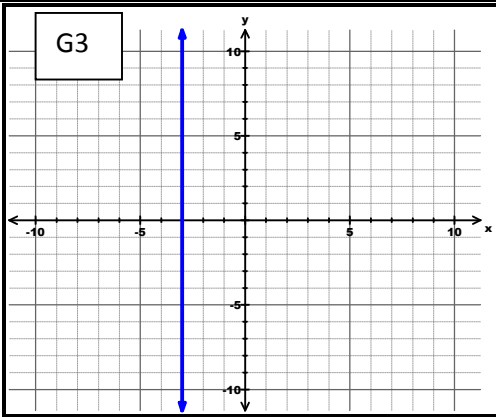
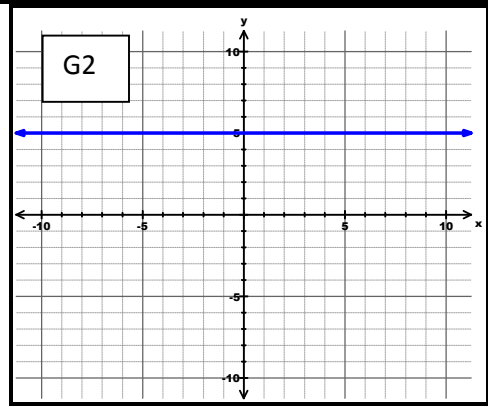
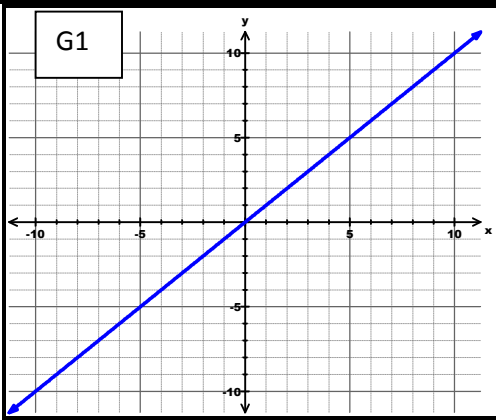
Match the graph cards to the cards that give the corresponding equation, set of table of values/ordered pairs, and description. Then, complete the extension activity.

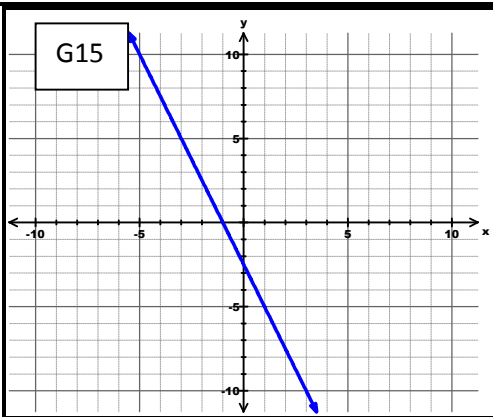
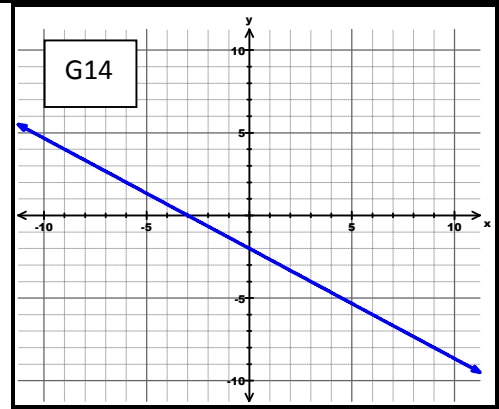
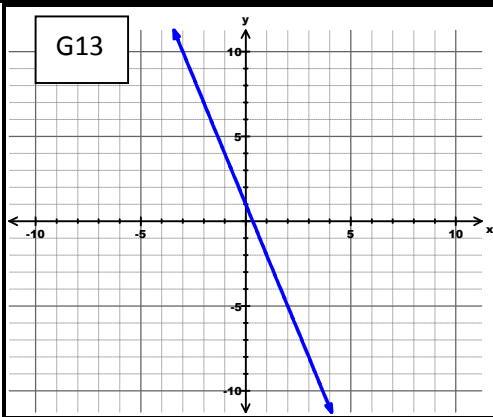
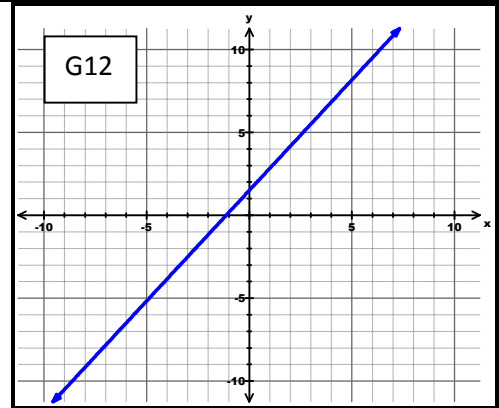
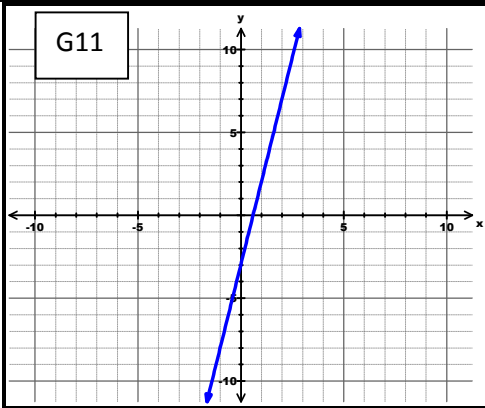
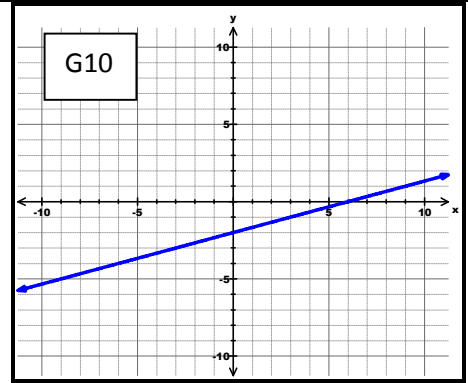
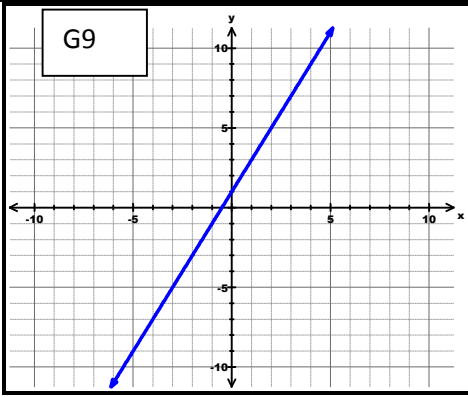
Directions:

- Work in pairs or groups.
- No graphing calculator or computer may be used.
- Complete the matching and record your answers below.

GRAPH	EQUATION	TABLE OF VALUES (ORDERED PAIRS)	DESCRIPTION
G1			
G2			
G3			
G4			
G5			
G6			
G7			
G8			
G9			
G10			

GRAPH	EQUATION	TABLE OF VALUES (ORDERED PAIRS)	DESCRIPTION
G11			
G12			
G13			
G14			
G15			





E1 $Y = \frac{X}{3} - 2$	E2 $X + Y = 4$
E3 $X + 3 = 0$	E4 $Y - 5 = 0$
E5 $X + Y = 0$	E6 $Y = -X - 3$
E7 $X - 5 = Y$	E8 $Y = X$
E9 $Y = 2X + 1$	E10 $Y = X + 2$
E11 $Y = -3X + 1$	E12 $Y = 5X - 3$
E13 $Y = -\frac{5}{2}X - \frac{5}{2}$	E14 $Y = -\frac{2}{3}X - 2$
E15 $Y = \frac{4}{3}X + 1\frac{1}{2}$	

P1 (-3, 5) (1, 5) (5, 5) (,)	P2 (-4, -2) (0, 2) (3, 5) (,)
P3 (-2, -3) (1, 3) (3, 7) (,)	P4 (-3, -3) (3, -1) (6, 0) (,)
P5 (-3, 0) (1, -4) (4, -7) (,)	P6 (-3, -5) (-3, 0) (-3, 4) (,)
P7 (-3, -3) (0, 0) (4, 4) (,)	P8 (-2, 6) (1, 3) (6, -2) (,)
P9 (-2, -7) (2, -3) (6, 1) (,)	P10 (-4, 4) (0, 0) (3, -3) (,)
P11 (-2, 7) (1, -2) (3, -8) (,)	P12 (-6, 2) (0, -2) (3, -4) (,)
P13 (-1, -8) (0, -3) (2, 7) (,)	P14 (-4, 7.5) (-2, 2.5) (2, -7.5) (,)
P15 (-6, -6.5) (0, 1.5) (3, 5.5) (,)	

<p>T1</p> <table border="1"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>-3</td> <td>5</td> </tr> <tr> <td>1</td> <td>5</td> </tr> <tr> <td>5</td> <td>5</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	X	Y	-3	5	1	5	5	5			<p>T2</p> <table border="1"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>-4</td> <td>-2</td> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>3</td> <td>5</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	X	Y	-4	-2	0	2	3	5			<p>T3</p> <table border="1"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>-2</td> <td>-3</td> </tr> <tr> <td>1</td> <td>3</td> </tr> <tr> <td>3</td> <td>7</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	X	Y	-2	-3	1	3	3	7			<p>T4</p> <table border="1"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>-3</td> <td>-3</td> </tr> <tr> <td>3</td> <td>-1</td> </tr> <tr> <td>6</td> <td>0</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	X	Y	-3	-3	3	-1	6	0		
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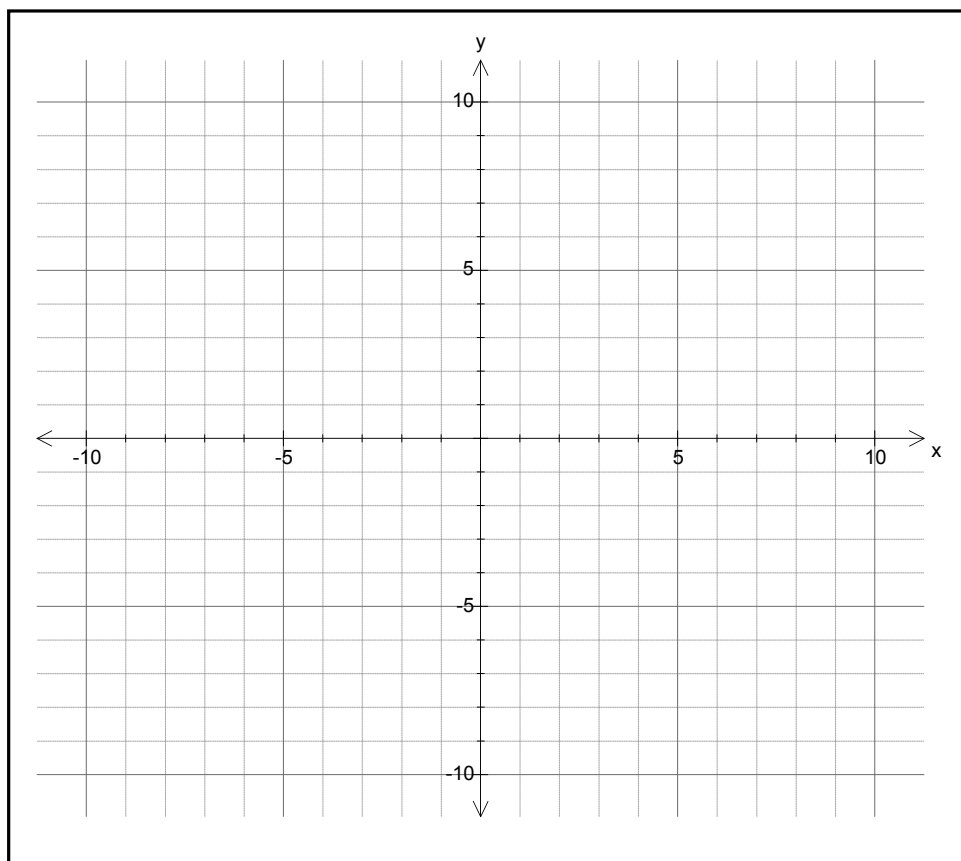
<p>D1</p> <p>This line has the same slope as graphs G1 and G5.</p>	<p>D2</p> <p>This line has slope of -1 and y-intercept of -3.</p>
<p>D3</p> <p>The x-intercept of this graph is between 0 and -1.</p>	<p>D4</p> <p>The slope of this line is positive and less than 1.</p>
<p>D5</p> <p>This line passes through (4, 0) and (0, 4).</p>	<p>D6</p> <p>This line passes through the origin and through quadrants II and IV.</p>
<p>D7</p> <p>This line's x-intercept is -2 and its y-intercept is 2.</p>	<p>D8</p> <p>This line does not have an x-intercept.</p>
<p>D9</p> <p>This line has no slope.</p>	<p>D10</p> <p>This line passes through the origin and has a positive slope.</p>
<p>D11</p> <p>The y-intercept of this line is 1 and its slope is negative.</p>	<p>D12</p> <p>This line passes through (0, -2) and has negative slope.</p>
<p>D13</p> <p>The equation for this line in standard form is: $8X - 6Y + 9 = 0$</p>	<p>D14</p> <p>The slope of this line is $-2\frac{1}{2}$ and the y-intercept is $-2\frac{1}{2}$.</p>
<p>D15</p> <p>The x-intercept of this graph is between 0 and 1 and its slope is positive.</p>	

ANSWER SHEET FOR GRAPHS G1—G15

GRAPH	EQUATION	TABLE OF VALUES (ORDERED PAIRS)	DESCRIPTION
G1	E8	P7	D10
G2	E4	P1	D8
G3	E3	P6	D9
G4	E5	P10	D6
G5	E10	P2	D7
G6	E7	P9	D1
G7	E2	P8	D5
G8	E6	P5	D2
G9	E9	P3	D3
G10	E1	P4	D4
G11	E12	P13	D15
G12	E15	P15	D13
G13	E11	P11	D11
G14	E14	P12	D12
G15	E13	P14	D14

EXTENSION ACTIVITY for Connecting Algebra and Geometry

On the grid provided below, graph the three equations: E2, E4, and E10.



Determine the area of the region enclosed by the three lines above. Show/explain your work below.