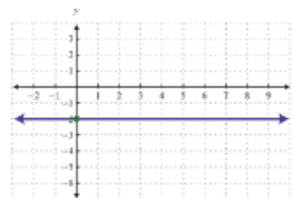
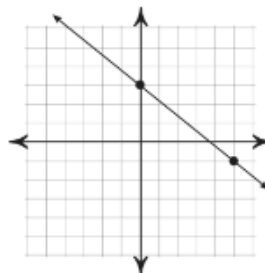
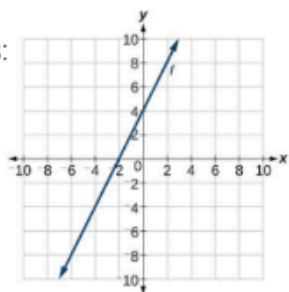


Name: _____

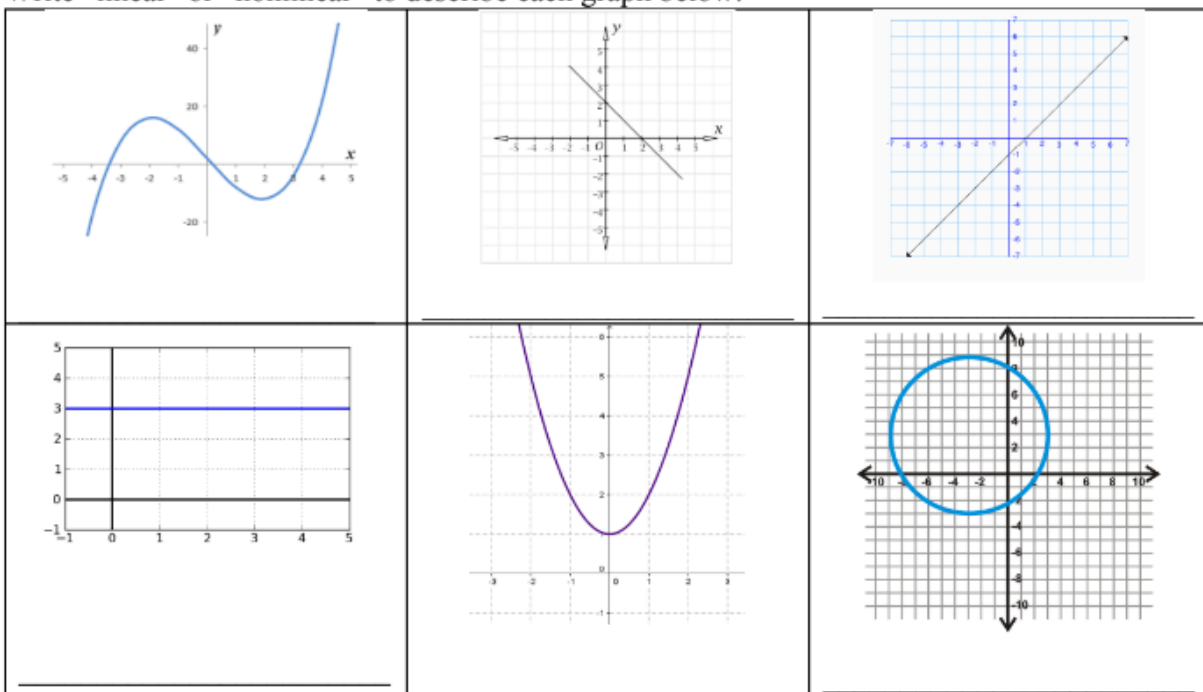
Linear or Nonlinear Worksheet

Graphs: Graphs are linear when they form a LINE.

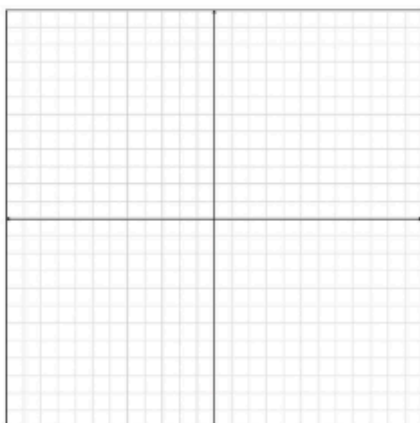
Examples:



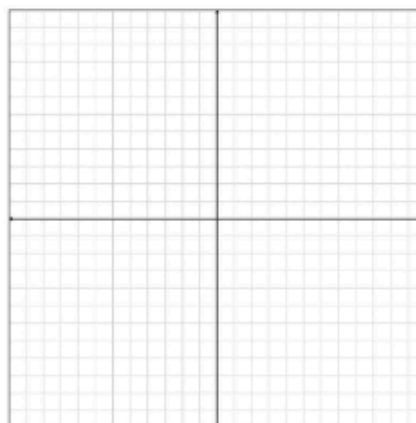
Write “linear” or “nonlinear” to describe each graph below:



Create your own linear graph example:



Create your own nonlinear graph example:



Tables: Tables represent a linear relation when the rate of change stays constant.

Examples:

x	y
0	0
1	1
2	2
3	3
4	4

x	y
0	3
2	11
4	19
6	27
8	35

x	y
-3	-1
-2	-4
-1	-7
0	-10
1	-13
2	-16

Write “linear” or “nonlinear” to describe each table below:

<table><tr><th>x</th><th>y</th></tr><tr><td>0</td><td>3</td></tr><tr><td>2</td><td>11</td></tr><tr><td>4</td><td>19</td></tr><tr><td>6</td><td>27</td></tr><tr><td>8</td><td>35</td></tr></table>	x	y	0	3	2	11	4	19	6	27	8	35	<table><tr><th>x</th><th>y</th></tr><tr><td>1</td><td>1</td></tr><tr><td>2</td><td>8</td></tr><tr><td>3</td><td>27</td></tr><tr><td>4</td><td>64</td></tr></table>	x	y	1	1	2	8	3	27	4	64	<table><tr><th>x</th><th>y</th></tr><tr><td>3</td><td>11</td></tr><tr><td>5</td><td>16</td></tr><tr><td>7</td><td>21</td></tr><tr><td>9</td><td>26</td></tr><tr><td>11</td><td>31</td></tr></table>	x	y	3	11	5	16	7	21	9	26	11	31	<table><tr><th>x</th><th>y</th></tr><tr><td>1</td><td>1</td></tr><tr><td>2</td><td>3</td></tr><tr><td>3</td><td>6</td></tr><tr><td>4</td><td>10</td></tr></table>	x	y	1	1	2	3	3	6	4	10	<table><tr><th>x</th><th>y</th></tr><tr><td>-2</td><td>-2</td></tr><tr><td>-1</td><td>2</td></tr><tr><td>0</td><td>6</td></tr><tr><td>1</td><td>10</td></tr><tr><td>2</td><td>14</td></tr></table>	x	y	-2	-2	-1	2	0	6	1	10	2	14
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2	14																																																											

Create your own linear table example:

x	y

Create your own nonlinear table example:

x	y

Equations: Equations represent a linear relation when the x and y have a power of 1.

Examples: $y = 2x + 8$ $2x + 9y = 17$ $x = 4$ $y = 2$

Write “linear” or “nonlinear” to describe each equation below:

$y = 3x^2$	$y = -5x + 2$	$3x - 4y = 8$
$y = 5$	$x^2 + 2y^2 = 25$	$3x = 5y^2$

Create your own linear equation example:

Create your own nonlinear equation example:
