

Name KELLY

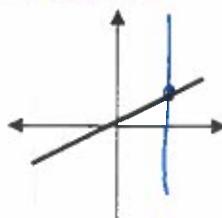
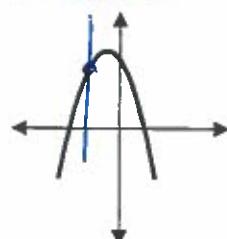
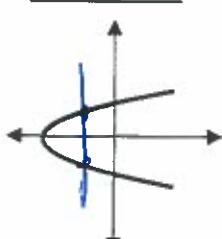
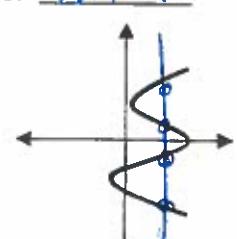
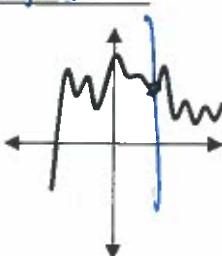
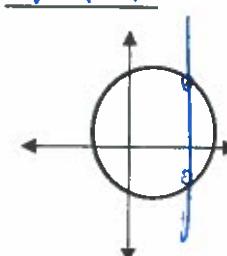
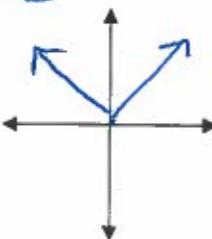
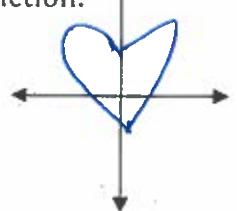
Date _____ Period _____

Homework: Is it a Function? and Multiple Representations of FunctionsDefine a function: every input (x) has only one output (y)

How do you determine if a set of data or a graph represents a function?

set of data \rightarrow x's cannot repeatgraph \rightarrow vertical line test

Directions: Determine whether or not each relation is a function. (For #7-8, sketch your own.)

1. function2. function3. Not function4. not function5. function6. Not function7. Draw a relation that is a function.8. Draw a relation that is NOT a function.

Directions: State whether or not the following relations are functions. (Hint: You may want to look at a table, mapping, or graph of the points.)

9. $\{(0, 1), (1, 2), (2, 3), (3, 4)\}$
function10. $\{(1, 1), (2, 1), (3, 1), (4, 1)\}$
function11. $\{(1, 1), (1, 2), (2, 3), (2, 4)\}$
not function12. $\{(-1, 0), (-2, 1), (-3, 2), (-4, 3)\}$
function13. $\{(5, 4), (4, 5), (5, 5), (6, 6)\}$
not function14. $\{(-1, 2), (-2, 3), (-3, 4), (-1, 5)\}$
not function

Directions: Complete each row of the table below by filling in the missing representations for each relation and stating whether or not the relation is a function.

	Table	Mapping	Graph	A function?												
15.	<table border="1"> <thead> <tr> <th>x</th><th>y</th></tr> </thead> <tbody> <tr><td>-3</td><td>4</td></tr> <tr><td>-2</td><td>3</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>1</td><td>0</td></tr> <tr><td>4</td><td>-3</td></tr> </tbody> </table>	x	y	-3	4	-2	3	0	1	1	0	4	-3	<pre> graph LR subgraph X_Oval [x] -3 -2 0 1 4 end subgraph Y_Oval [y] 4 3 1 0 -3 end -3 --> 4 -2 --> 3 0 --> 1 1 --> 0 4 --> -3 </pre>		yes
x	y															
-3	4															
-2	3															
0	1															
1	0															
4	-3															
16.	<table border="1"> <thead> <tr> <th>x</th><th>y</th></tr> </thead> <tbody> <tr><td>-4</td><td>-2</td></tr> <tr><td>-1</td><td>-1</td></tr> <tr><td>-1</td><td>5</td></tr> <tr><td>2</td><td>0</td></tr> <tr><td>3</td><td>3</td></tr> </tbody> </table>	x	y	-4	-2	-1	-1	-1	5	2	0	3	3	<pre> graph LR subgraph X_Oval [x] -4 -1 2 3 end subgraph Y_Oval [y] -2 -1 0 3 5 end -4 --> -2 -1 --> -1 -1 --> 5 2 --> 0 3 --> 3 </pre>		no
x	y															
-4	-2															
-1	-1															
-1	5															
2	0															
3	3															
17.	<table border="1"> <thead> <tr> <th>x</th><th>y</th></tr> </thead> <tbody> <tr><td>-2</td><td>2</td></tr> <tr><td>-1</td><td>-1</td></tr> <tr><td>0</td><td>-2</td></tr> <tr><td>1</td><td>-1</td></tr> <tr><td>2</td><td>2</td></tr> </tbody> </table>	x	y	-2	2	-1	-1	0	-2	1	-1	2	2	<pre> graph LR subgraph X_Oval [x] -2 -1 0 1 2 end subgraph Y_Oval [y] 2 -1 -2 end -2 --> 2 -1 --> -1 -1 --> -2 0 --> -2 1 --> -1 2 --> 2 </pre>		yes
x	y															
-2	2															
-1	-1															
0	-2															
1	-1															
2	2															
18.	<table border="1"> <thead> <tr> <th>x</th><th>y</th></tr> </thead> <tbody> <tr><td>-4</td><td>-1</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>1</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>-4</td><td>3</td></tr> </tbody> </table>	x	y	-4	-1	0	0	1	1	0	2	-4	3	<pre> graph LR subgraph X_Oval [x] -4 0 1 0 -4 end subgraph Y_Oval [y] -1 0 1 2 3 end -4 --> -1 0 --> 0 1 --> 1 0 --> 2 -4 --> 3 </pre>		no
x	y															
-4	-1															
0	0															
1	1															
0	2															
-4	3															
19.	<table border="1"> <thead> <tr> <th>x</th><th>y</th></tr> </thead> <tbody> <tr><td>-1</td><td>4</td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>1</td><td>4</td></tr> <tr><td>2</td><td>4</td></tr> <tr><td>3</td><td>4</td></tr> </tbody> </table>	x	y	-1	4	0	4	1	4	2	4	3	4	<pre> graph LR subgraph X_Oval [x] -1 0 1 2 3 end subgraph Y_Oval [y] 4 end -1 --> 4 0 --> 4 1 --> 4 2 --> 4 3 --> 4 </pre>		yes
x	y															
-1	4															
0	4															
1	4															
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3	4															
20.	<table border="1"> <thead> <tr> <th>x</th><th>y</th></tr> </thead> <tbody> <tr><td>2</td><td>-2</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>4</td><td>-2</td></tr> <tr><td>4</td><td>2</td></tr> <tr><td>0</td><td>-2</td></tr> </tbody> </table>	x	y	2	-2	2	2	4	-2	4	2	0	-2	<pre> graph LR subgraph X_Oval [x] 2 2 4 4 0 end subgraph Y_Oval [y] -2 2 end 2 --> -2 2 --> 2 4 --> -2 4 --> 2 0 --> -2 </pre>		no
x	y															
2	-2															
2	2															
4	-2															
4	2															
0	-2															

(On Question #20, create your own set of data, represent it in a table, mapping, and graph, and then state whether it is a function or not a function.)