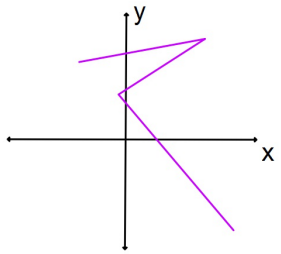
## Families of Functions Activity

Is each of these a function?

| X | Y |
|---|---|
| 1 | 5 |
| 2 | 6 |
| 3 | -2 |
| 4 | 5 |

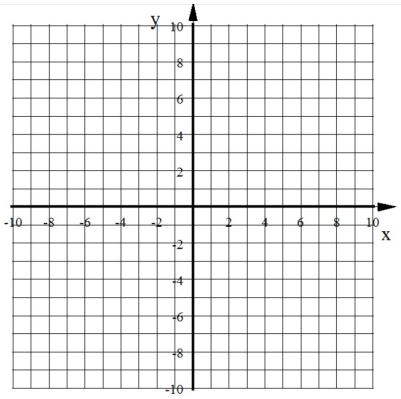
Yes, each x-value produces only one y-value. In other words, no x-value repeats.




No, because the graph fails the vertical line test. This means that there is a vertical line that can touch the graph more than once. Therefore, there is at least one x-value that produces more than one y-value.

A.

| X | Y |
|---|---|
| −2 | 9 |
| −1 | 7 |
| 0 | 5 |
| 1 | 3 |
| 2 | 1 |



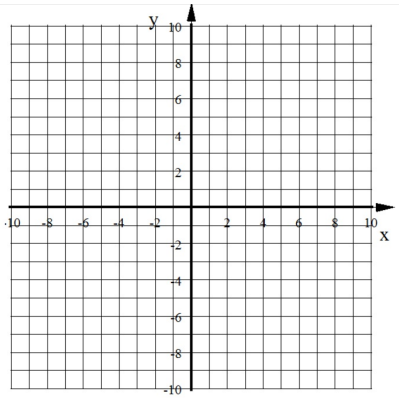
Equation:

Function Name:

3 other points on the graph:

B.

| X | Y |
|---|---|
| −3 | 9 |
| −2 | 4 |
| −1 | 1 |
| 0 | 0 |
| 1 | 1 |
| 2 | 4 |
| 3 | 9 |



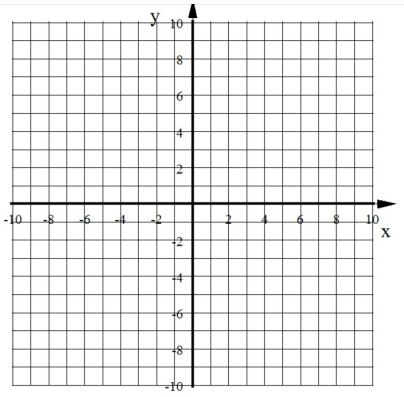
Equation:

Function Name:

3 other points on the graph:

C.

| X | Y |
|---|---|
| 0 | 0 |
| 1 | 1 |
| 4 | 2 |
| 9 | 3 |
| 16 | 4 |



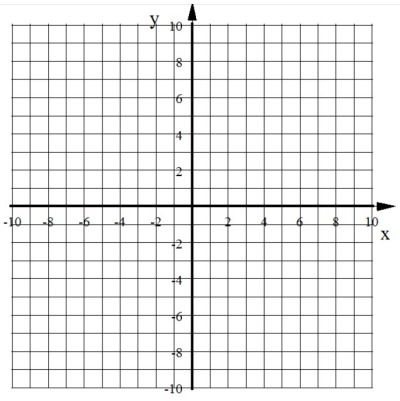
Equation:

Function Name:

3 other points on the graph:

D.

| X | Y |
|---|---|
| −3 | 0.125 |
| −2 | 0.25 |
| −1 | 0.5 |
| 0 | 1 |
| 1 | 2 |
| 2 | 4 |
| 3 | 8 |



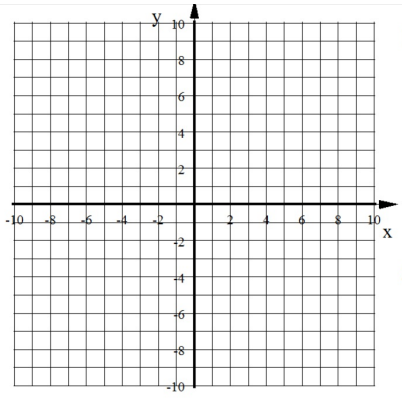
Equation:

Function Name:

3 other points on the graph:

E.

| X | Y |
|---|---|
| −3 | 3 |
| −2 | 2 |
| −1 | 1 |
| 0 | 0 |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |



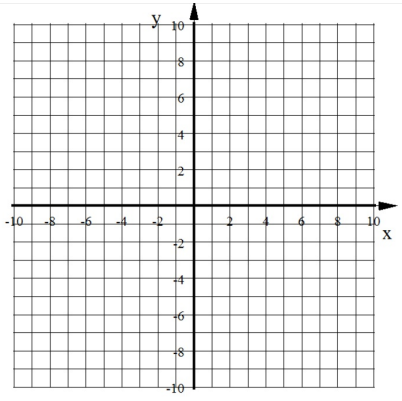
Equation:

Function Name:

3 other points on the graph:

F.

| X | Y |
|---|---|
| −2 | 4 |
| −1 | 4 |
| 0 | 4 |
| 1 | 4 |
| 2 | 4 |



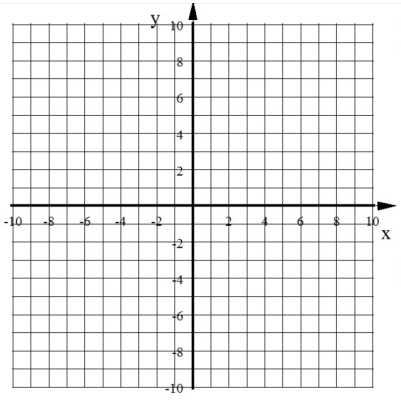
Equation:

Function Name:

3 other points on the graph:

G.

| X | Y |
|---|---|
| −2 | −8 |
| −1 | −1 |
| 0 | 0 |
| 1 | 1 |
| 2 | 8 |



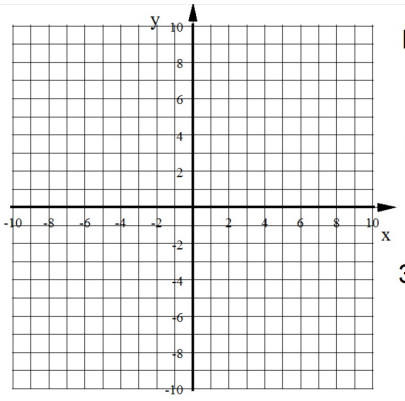
Equation:

Function Name:

3 other points on the graph:

H.

| X | Y |
|---|---|
| −4 | −0.25 |
| −2 | −0.5 |
| −1 | −1 |
| 0 | □ |
| 1 | 1 |
| 2 | 0.5 |
| 4 | 0.25 |




Equation:

Function Name:

3 other points on the graph: