**Identifying a table a values as linear or nonlinear**

One of the tables of values below represents a linear function and the other does not. Identify the tables as linear or non linear and explain how you can tell.



Circle one: Linear Nonlinear Circle one: Linear Nonlinear

Explanation: Explanation:

Try: Identify each table of values as linear or nonlinear and explain.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
| *x* | *F*(*x*) |
| 1 | 12 |
| 2 | 7 |
| 3 | 4 |
| 4 | 3 |

 |

|  |  |
| --- | --- |
| *x* | *y* |
| 1 | 0 |
| 2 | 2 |
| 3 | 4 |
| 4 | 6 |

 |

|  |  |
| --- | --- |
| *x* | *F*(*x*) |
| 1 | 1 |
| 4 | 7 |
| 5 | 10 |
| 8 | 15 |

 |

Example 1: y – intercept is given

Write an equation in slope intercept form for the following table of values.

|  |  |
| --- | --- |
| x | y |
| -1 | -1 |
| 0 | 2 |
| 3 | 11 |
| 5 | 17 |

Step 1: Find the slope.

Step 2: Find the y-intercept.

Step 3: Use the slope and y-intercept to write your equation in slope-intercept form.

Example 2: y-intercept is not given

|  |  |
| --- | --- |
| x | y |
| -4 | -5 |
| -1 | 1 |
| 1 | 5 |
| 3 | 9 |

Step 1: Find the slope.

Step 2: Find the y-intercept.

Step 3: Use the slope and y-intercept to write your equation in slope-intercept form.

Try: Write an equation in slope-intercept form for the following tables.

|  |  |
| --- | --- |
| x | y |
| -2 | -5 |
| 0 | -1 |
| 2 | 3 |
| 3 | 5 |

1.

|  |  |
| --- | --- |
| x | y |
| -4 | -2 |
| 0 | 1 |
| 4 | 4 |
| 12 | 10 |

2.

|  |  |
| --- | --- |
| x | y |
| -3 | 10 |
| -1 | 6 |
| 1 | 2 |
| 3 | -2 |

3.

4.

|  |  |
| --- | --- |
| x | y |
| -2 | -3 |
| 2 | -1 |
| 4 | 0 |
| 6 | 1 |

Write the equation of the line given two points.

Together:

1) (1, 8) (4, 17) 2) (2, -4) (6, -6)

You try:

3) (1, 3) (4, 15) 4) (3, 4) (6, 6)