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A number line is an example of a visual model.
A number line can show number relationships and number operations.
A good number line presents information clearly to the reader.
A good number line has three properties:
1-an origin - a reference point or starting point
2 - a uniform scale or standard unit
3 - agreement on order or direction

The number line below satisfies the three properties.


1 - Zero is the starting point.
2 - The vertical marks are called tick marks. The numeric labels indicate the number values corresponding to the tick marks. The space between any two adjacent vertical marks represents a difference of one unit.
3 - Number values become larger as you move to the right on the line.
Number values become smaller as you move to the left on the line.
The arrow $->$ indicates that the number line and number values continue.

1. This number line also satisfies the three properties.


The reference or starting point is $\qquad$
The space between any two adjacent tick marks represents $\qquad$ units.
2. Decide whether each number line is a good visual model. Indicate your response by choosing $\mathbf{Y}$ or $\mathbf{N}$.


A number line can be used to show one or more selected number values. Each selected number is indicated with a $\bullet$ at the corresponding position.
The $\bullet$ is the graph of the number.
The resulting picture is called a number line graph.

The number line below shows the graph of the numbers $0,4,8,11$ and 12 .

3. List the numbers graphed on this number line.

4. On this number line show the graphs of $1,3,5,7,9,11,13$ and 15 .

5. Label this number line and show the graphs of $0,4,8,12$ and 16

6. Label this number line and graph 110, 125, 103, 118 and 130

7. Choose five counting numbers less than 30 .

Construct a number line model, label it properly and graph your five numbers.

