



### EXAMPLE 4 Graph a function represented by a table

**VOTING** In 1920 the ratification of the 19th amendment to the United States Constitution gave women the right to vote. The table shows the number (to the nearest million) of votes cast in presidential elections both before and since women were able to vote.



Presidential campaign button

-4 means 4 years before 1920, or 1916.

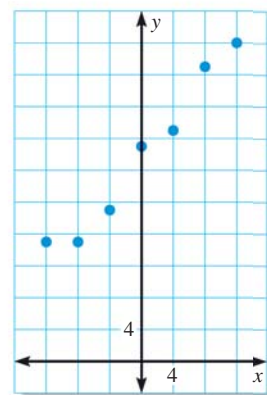
0 represents the year 1920.

<b>Years before or since 1920</b>	-12	-8	-4	0	4	8	12
<b>Votes (millions)</b>	15	15	19	27	29	37	40

- Explain how you know that the table represents a function.
- Graph the function represented by the table.
- Describe any trend in the number of votes cast.

#### Solution

- The table represents a function because each input has exactly one output.
- To graph the function, let  $x$  be the number of years before or since 1920. Let  $y$  be the number of votes cast (in millions).  
The graph of the function is shown.
- In the three election years before 1920, the number of votes cast was less than 20 million. In 1920, the number of votes cast was greater than 20 million. The number of votes cast continued to increase in the three election years since 1920.



#### GUIDED PRACTICE for Example 4

- VOTING** The presidential election in 1972 was the first election in which 18-year-olds were allowed to vote. The table shows the number (to the nearest million) of votes cast in presidential elections both before and since 1972.

<b>Years before or since 1972</b>	-12	-8	-4	0	4	8	12
<b>Votes (millions)</b>	69	71	73	78	82	87	93

- Explain how you know the graph represents a function.
- Graph the function represented by the table.
- Describe any trend in the number of votes cast.