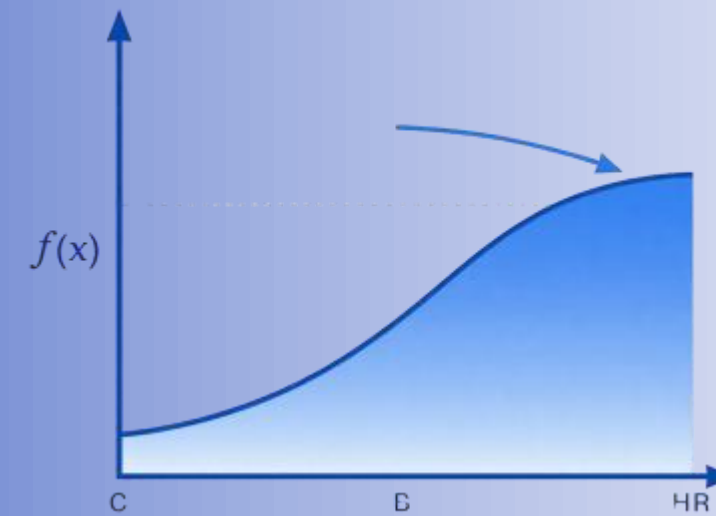




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f is a Function



EDUCATION and ENTERTAINMENT and EMPIRE (E³)

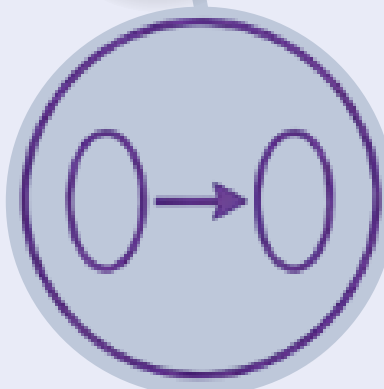


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What will we
learn in this
lesson?



01 Graphical Representation of a
graph



02 Arrow Diagram



03 f is a function



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The relation between the value of **1 on the x-axis** & the value of **3 on the y-axis** can be written as **$1 \rightarrow 3$** .



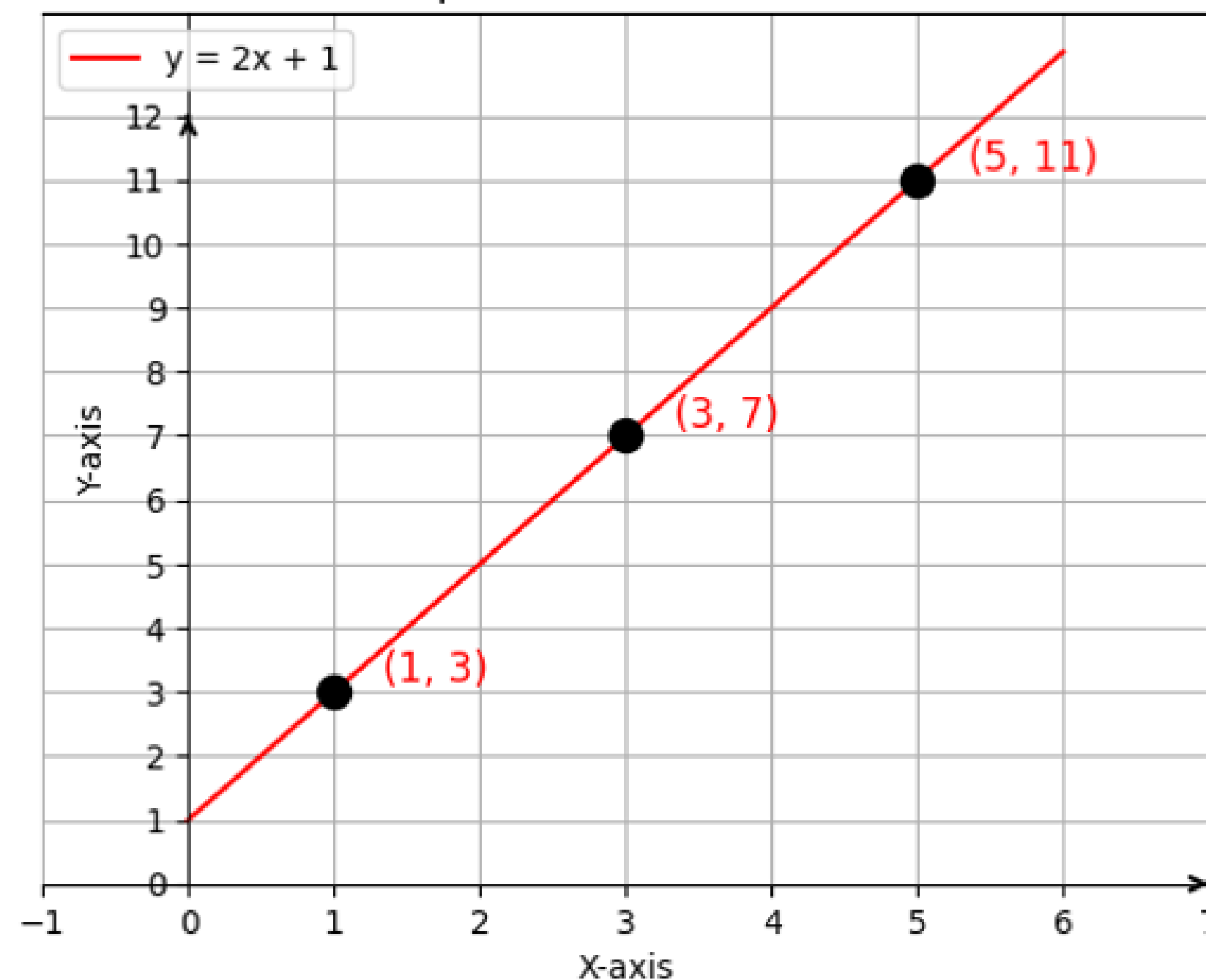
1 is mapped to 3



$3 \rightarrow 7$
 $5 \rightarrow 11$
Every point (x, y) on the line is corresponding to the mapping of $x \rightarrow y$.

Graphical Representation of Functions

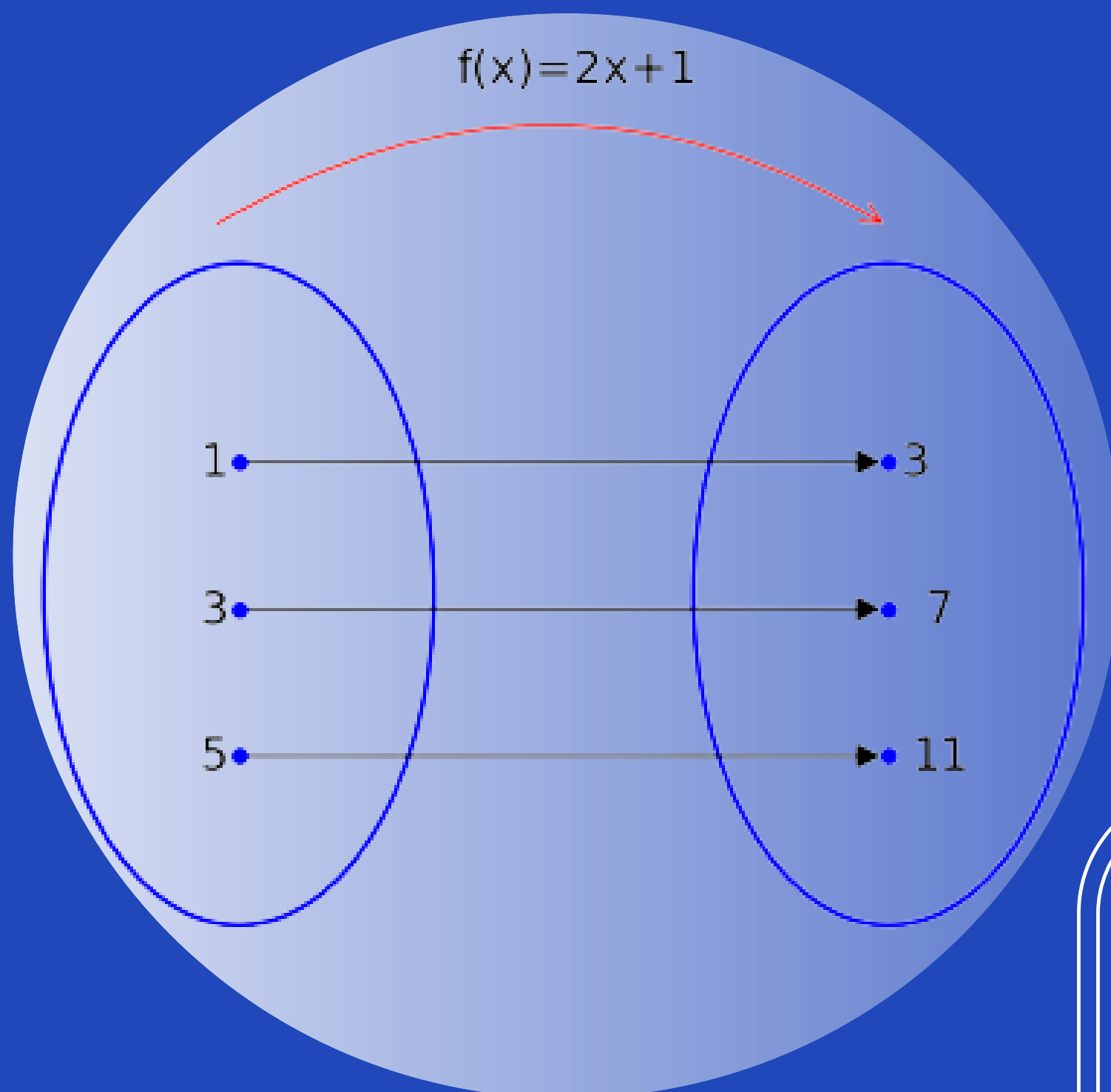
Graph of a Linear Function





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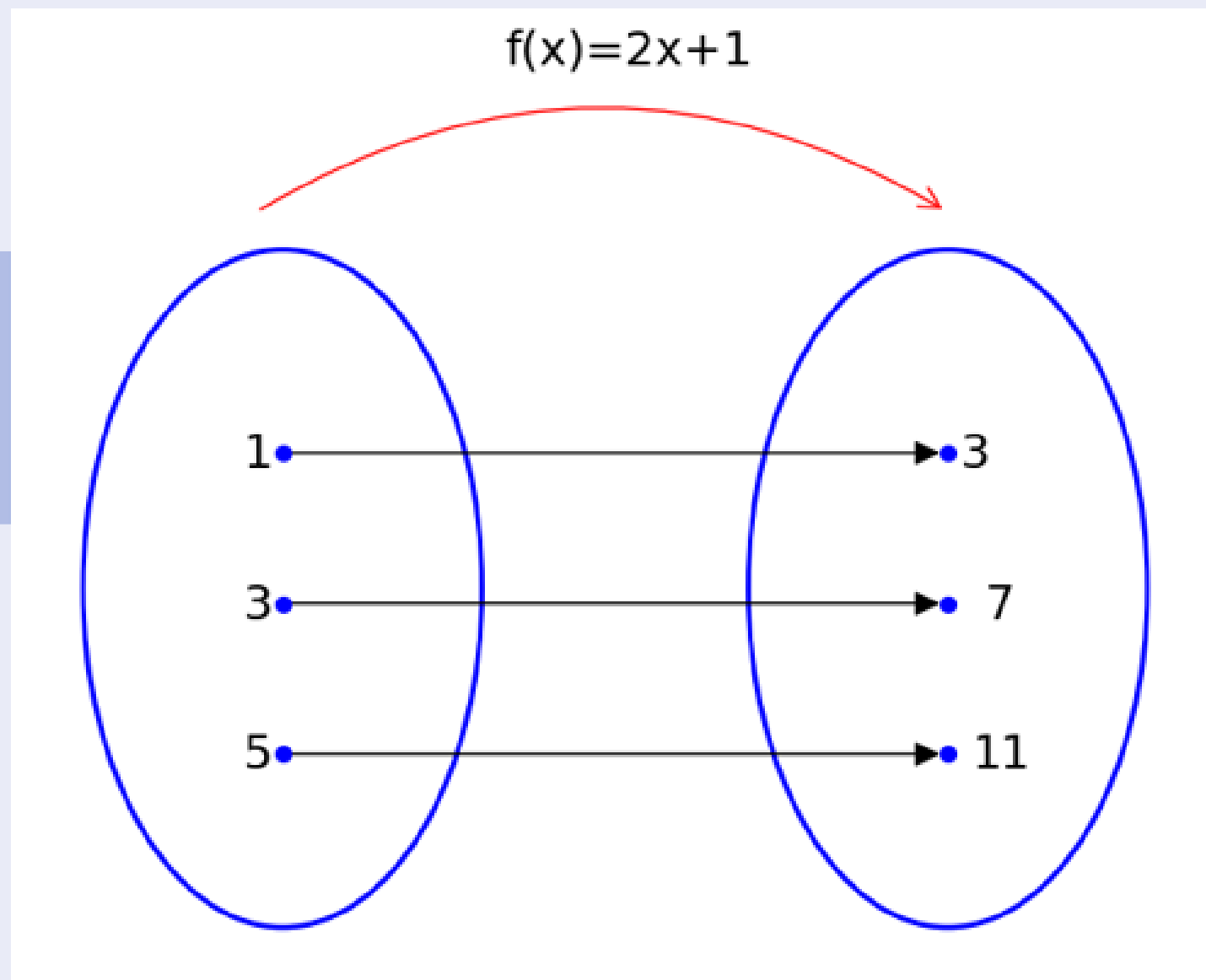
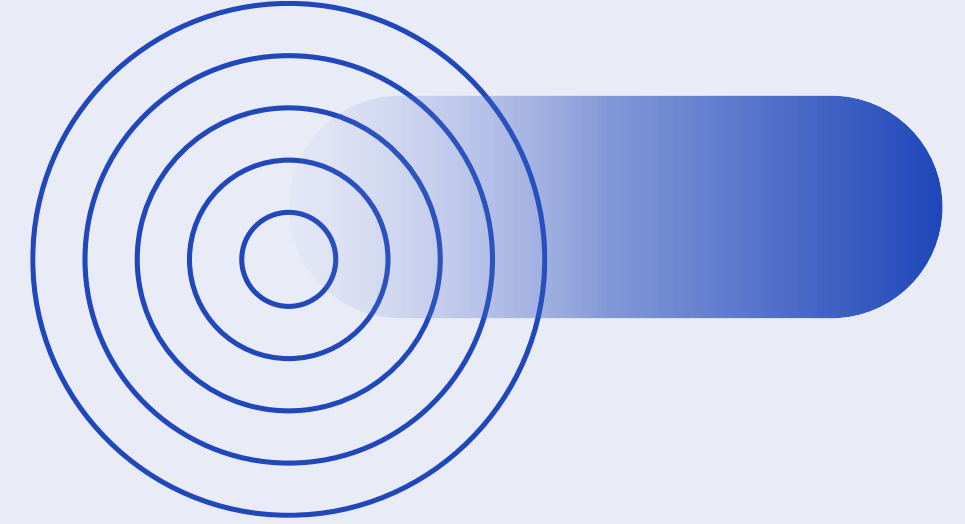
Arrow Diagram



- ➔ The relation from part of the mapping $x \rightarrow y$ can be represented by an arrow diagram
- ➔ This type of relation is known as **function** or **mapping**
- ➔ Function relating set X to set Y is a special relation where each element $x \in X$ is mapped to one and only one element $y \in Y$



f is a function



1

If f is a function from set $X = \{1, 3, 5\}$ to set $Y = \{3, 7, 11\}$ and is defined by

$$f : 1 \rightarrow 3$$

$$f : 3 \rightarrow 7$$

$$f : 5 \rightarrow 11$$

2

Element **1** is known as the **object** and element **3** is its **image**



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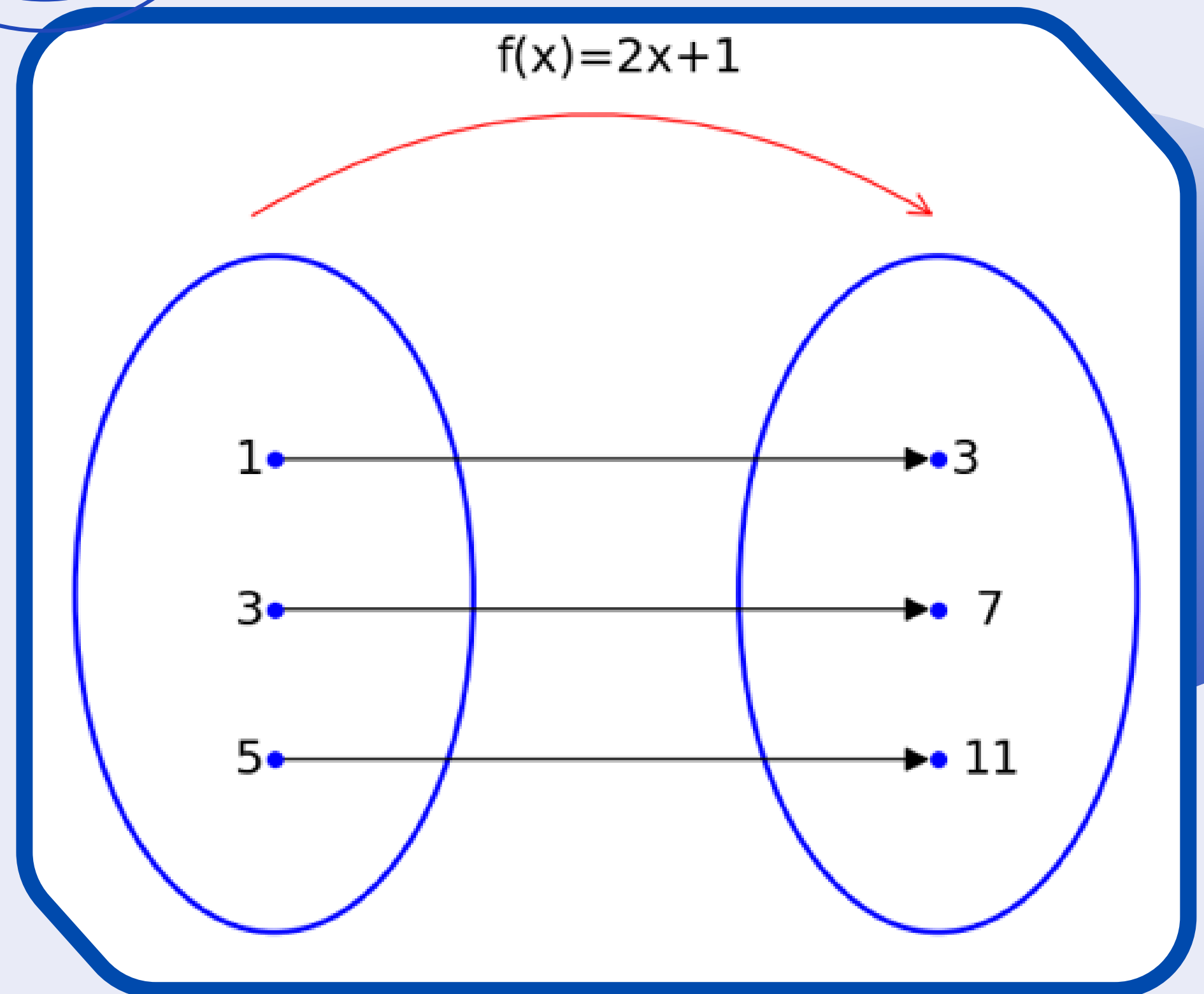
f is a function

Any element x in set X that is mapped to one element y in set Y by $y = 2x + 1$ is written in function notation

$$f : x \rightarrow y \text{ or } f(x) = y$$

$$f : x \rightarrow 2x + 1 \text{ or } f(x) = 2x + 1$$

x is the object and $2x + 1$ is the image





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f is a function

$$f : x \rightarrow 2x + 1$$

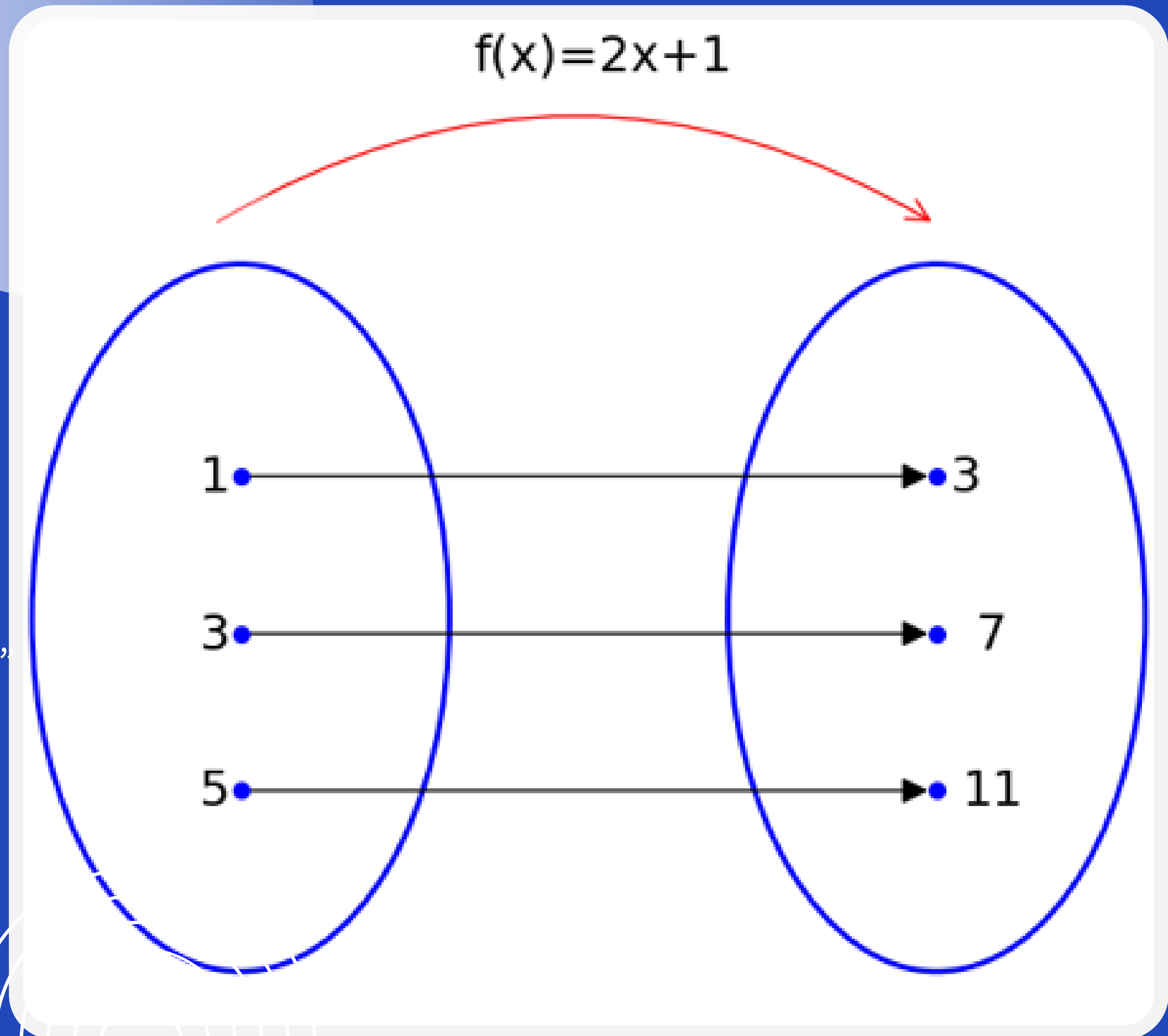
“function f maps x to $2x + 1$ ”

$$f(x) = 2x + 1$$

“ $2x + 1$ is the image of x under the function f ”

Or

“function f of x is equal to $2x + 1$ ”

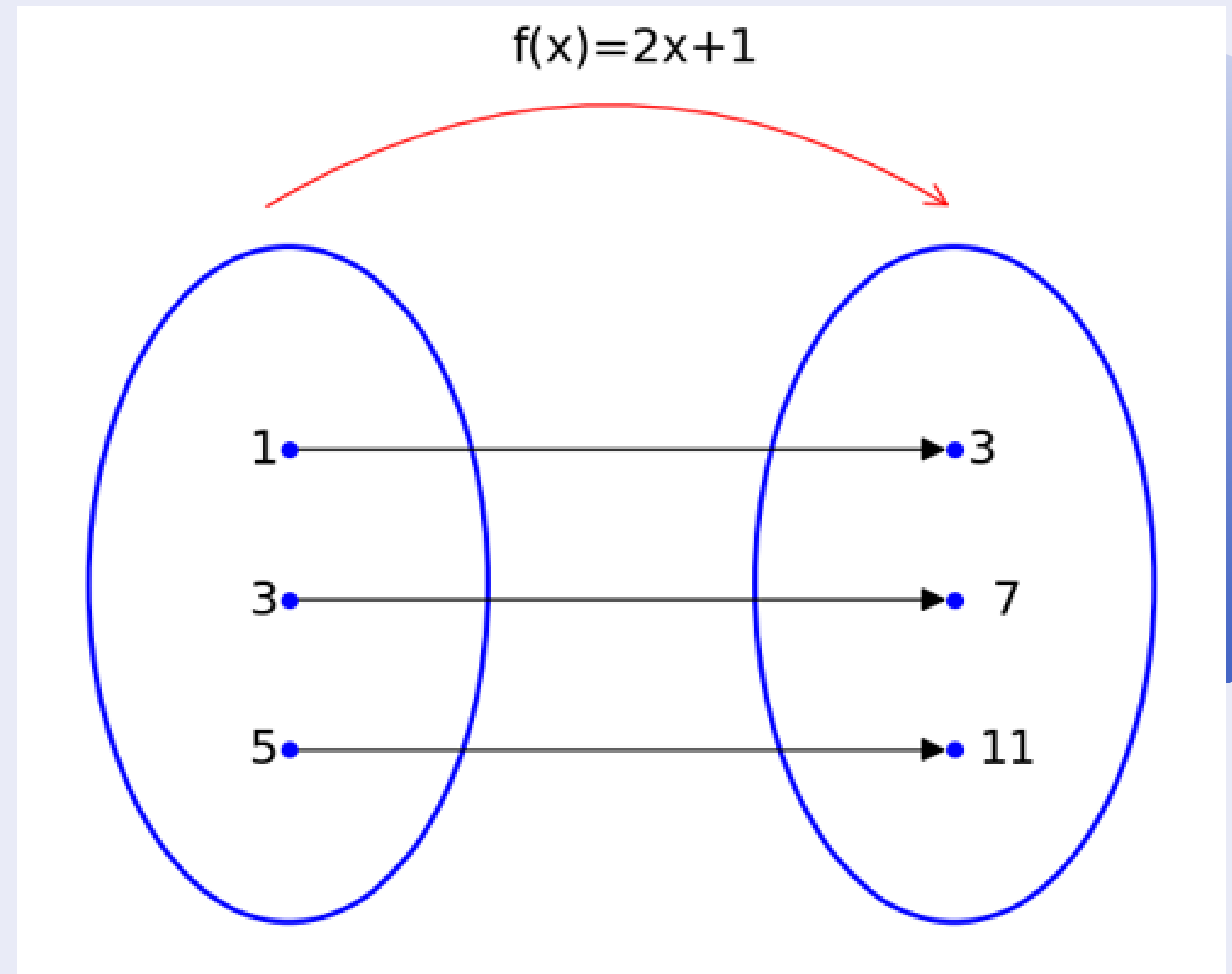




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f is a function

- ✓ “ $2x + 1$ for 1 is 3”
- ✓ “ $2x + 1$ for 3 is 7”
- ✓ “ $2x + 1$ for 5 is 11”





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Thank you
so much

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