

1.3 Function Notation

$f(x)$ notation: read
"f of x"

aka Euler's notation

ie $T(x) = x$

'T of x equals x'

et Evaluate: $B(40)$ if

$$B(x) = \frac{x^2}{20}$$

$$B(40) = \frac{40^2}{20}$$

$$B(40) = \frac{1600}{20}$$

$$B(40) = 80$$

Mapping Notation:

$$T: \cancel{x} \rightarrow \cancel{x}$$

'T maps \cancel{x} onto \cancel{x} '

$$\rightarrow B(x) = \frac{x^2}{20}$$

$$\rightarrow B: x \rightarrow \frac{x^2}{20}$$

$$B: 40 \Rightarrow \frac{40^2}{20}$$

ex The sum of the angle measures in a polygon with " n " sides is given by the formula:

$$S = 180(n - 2)$$

1) F(x) notation

$$S(n) = 180(n - 2)$$

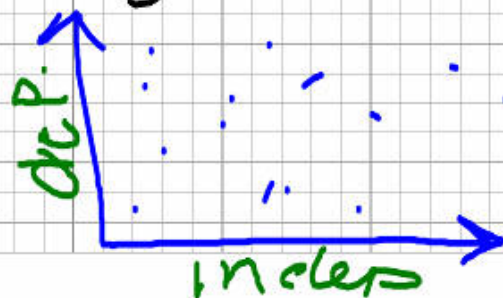
2) Mapping notation

$$S: n \rightarrow 180(n - 2)$$

1.4 Graphs & Functions

domain \rightarrow indep. var \rightarrow
 $x \rightarrow$ input

Range: \rightarrow dep. var \rightarrow
 $y \rightarrow$ output



Rainfall
per month

Relation: set of ordered
pairs

$\{(\underline{1}, 2)(\underline{3}, 1)(\underline{4}, 5)\}$
 ↑ the set of **YES!**

Is this relation
a function?

(do x's repeat?)
 if yes → no func
 if no → is func

$\{(\underline{3}, 1)(2, 5)(\underline{3}, 6)(1, 9)\}$

Theorem: Vertical Line Test

No vertical line intersects the graph of a function at more than 1 point.

