

September 29, 2015
 Functions

Sep 29-9:05 AM

Relation \rightarrow ^{ordered pair}
 (a, b)
 (x, y)
 (Horizontal, Vertical)
 Functions

Sep 29-9:11 AM

Function Machine

<u>Input</u>	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> $3x + 4$ $3(-2) + 4$ </div>	<u>output</u>
5		19
0		4
-2		-2
	$(5, 19)$ $(0, 4)$ $(-2, -2)$	

Sep 29-9:09 AM

$R = \{ (-7, -8), (-7, -6), (-5, 0) \}$
 Not a function

Sep 29-9:31 AM

$R_1 = \{ (-7, 0), (2, -3), (6, 4), (2, -8) \}$
 $R_2 = \{ (-5, 4), (-7, 4), (6, 4), (-8, 4) \}$

Sep 29-9:35 AM

Notation

$5 \xrightarrow{\text{mapping}} 19$
 $0 \xrightarrow{\quad} 4$
 $-2 \xrightarrow{\quad} -2$

f maps 5 to 19
 f maps x to $3x + 4$
 $f : x \rightarrow 3x + 4$
 $f(x) = 3x + 4$ *function notation*
 f of x equals $3x + 4$
 $f(5) = 3(5) + 4$
 $= 15 + 4$
 $= 19$

Sep 29-9:41 AM

$$f(x) = 2x^2 - 3x + 8$$

$$\begin{aligned} f(-1) &= 2(-1)^2 - 3(-1) + 8 \\ &= 2 \cdot (-1) \cdot (-1) + 3 + 8 \\ &= 2 \cdot (1) + 3 + 8 \\ &= 2 + 3 + 8 \\ &= 5 + 8 \\ &= 13 \end{aligned}$$

$$\begin{aligned} f(a) &= 2(a)^2 - 3(a) + 8 \\ &= 2a^2 - 3a + 8 \end{aligned}$$

Reach of Understanding 5.1
Do #1 - #45 m3

Sep 29-9:46 AM