

3-1 D1 Notes

Sunday, January 21, 2024 9:31 PM

Vocabulary.

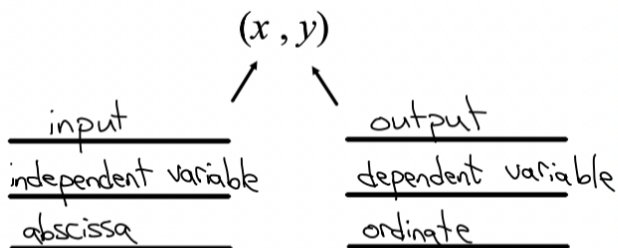
Domain: Set of all possible inputs, usually x 's

Range: Set of all possible outputs, usually y 's

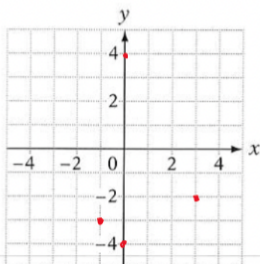
Relation: A rule or a map that assigns inputs to outputs.

Ordered Pair: an input assigned to an output written in the form (x, y)

Ordered Pairs



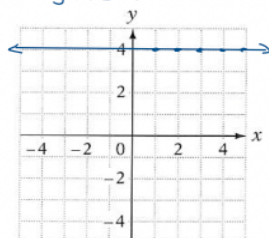
2. Graph the ordered pairs $(-1, -3)$, $(0, -4)$, $(0, 4)$, and $(3, -2)$.



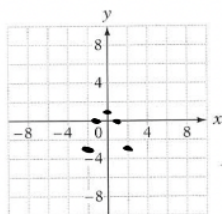
Domain: $\{-1, 0, 3\}$

Range: $\{-4, -3, -2, 4\}$

8. Draw a line through all points with an ordinate of 4.
y value of 4



10. Graph the ordered-pair solutions of $y = -x^2 + 1$ when $x = -2, -1, 0, 1,$ and 2 .



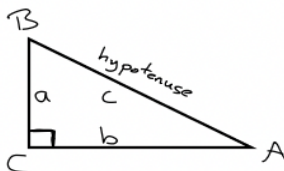
Domain: $\{-2, -1, 0, 1, 2\}$
Range: $\{-3, 0, 1\}$

Make Input/Output table

x	y	
-2	-3	$-(-2)^2 + 1 = -[4] + 1$
-1	0	$-(-1)^2 + 1 = -[1] + 1$
0	1	$-(0)^2 + 1 = 1$
1	0	$-(1)^2 + 1 = 0$
2	-3	$-(2)^2 + 1 = -3$

Pythagorean Theorem -

$$a^2 + b^2 = c^2$$



Find the length to nearest hundredth and the midpoint of the line segment between the points.

18. $P_1(-2, 3)$ and $P_2(4, -1)$

Distance:

Midpoint: $(1, 1)$

$$\begin{aligned} a^2 + b^2 &= c^2 \\ 4^2 + 6^2 &= c^2 \\ 16 + 36 &= c^2 \\ \sqrt{52} &= \sqrt{c^2} \\ \boxed{7.21} &= |c| \end{aligned}$$

