Do Now

Evaluate the following

1) $|-18| = 18$

2) $|x+y|; x=3 \ \& \ y=-5$

$|3+(-5)|$

$|-2| = 2$

Jan 2-1:25 PM

Homework Answers

1. C
2. B
3. A
4. B
5. A
6. D
7. $0 \le t \le 4$

The points for the first 4 seconds are (0, 0), (1, 48), (2, 64), (3, 48), (4,0). The rocket takes off at 0 seconds and lands 4 seconds later.

Jan 2-1:30 PM

The Absolute Value Function
f(x) = |x|

Absolute Value

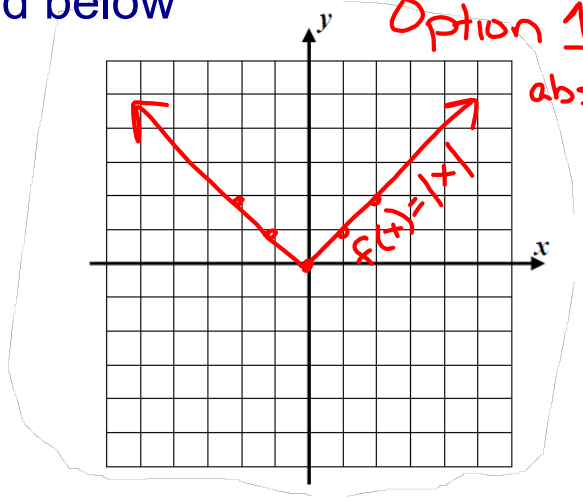
Can be defined as $f(x)=\begin{cases}-x, & x<0\\ x, & x\geq 0\end{cases}$

MATH → NUM Option 1 abs(

Graph f(x) on the grid below

x	y
-2	2
-1	1
0	0
1	1
2	2

Turning Point



Jan 26-12:23 AM

To determine x-value where an absolute value graph turns, find the value that makes the expression inside the absolute value equal 0.

Given $d(t)=\left|\frac{5}{2}t\right|$

a) Find the turning point

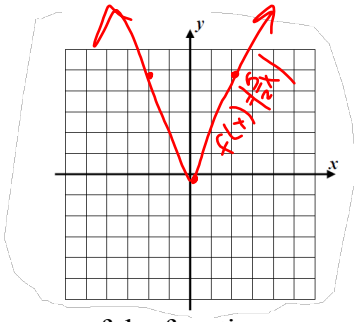
$\frac{2}{5}\cdot\frac{5}{2}t=0\cdot\frac{2}{5}$

$t=0$

b) Graph the function $d(t)$ on the coordinate grid

Y= MATH → NUM Option 1

x	y
-4	10
-2	5
0	0
2	5
4	10



c) Find the domain & range of the function

Domain $(-\infty,\infty)$

Range $[0,\infty)$

Jan 29-1:41 PM

Given $f(x) = -|x-3|$

First, identify the turning point
(Set the expression inside the absolute value = 0!)

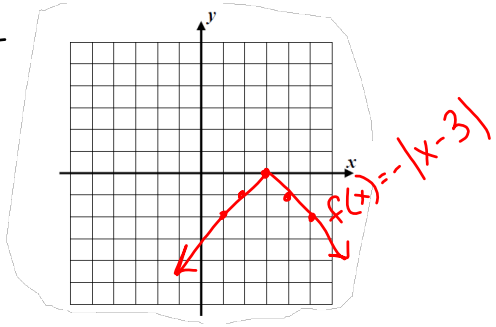
$f(x) = -|x-3|$

a) Find the turning point

$x - 3 = 0$
$+3 \quad +3$
$x = 3$

b) Graph the function $f(x)$ on the coordinate grid

x	y
1	-2
2	-1
3	0
4	-1
5	-2



c) Find the domain & range of the function

Domain
$(-\infty, \infty)$

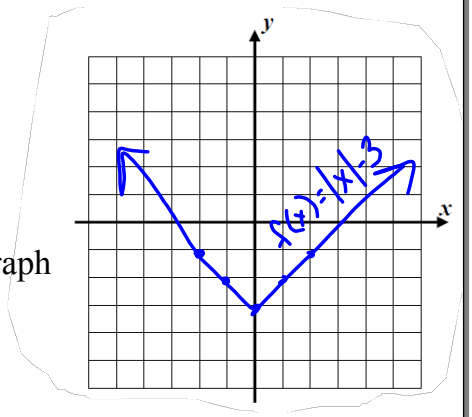
Range
$(-\infty, 0]$

Jan 26-12:49 AM

Graph $f(x) = |x| - 3$

a) Find the Turning Point

$x = 0$



b) Create a table of values and graph

x	y
-2	-1
-1	-2
0	-3
1	-2
2	-1

c) Find the domain & range of the function

Domain
$(-\infty, \infty)$

Range
$[-3, \infty)$

Jan 26-12:49 AM

Graph $f(x) = -|3x|$

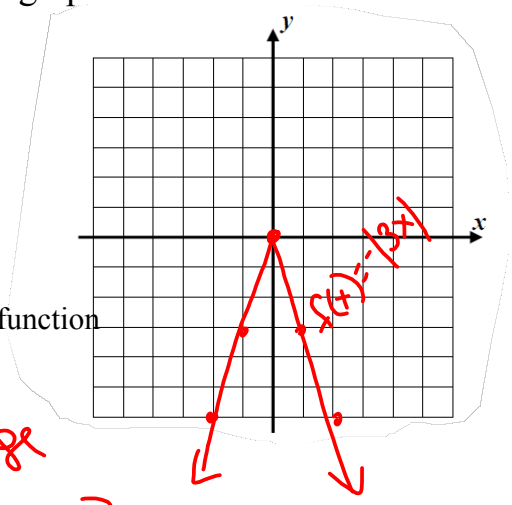
a) Find the Turning Point

$3x = 0$

$x = 0$

b) Create a table of values and graph

x	y
-2	-6
-1	-3
0	0
1	-3
2	-6



c) Find the domain & range of the function

Domain $(-\infty, \infty)$

Range $(-\infty, 0]$

Jan 26-12:49 AM