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1/18/18.

Mini-Project 2: Piecewise-Defined Functions.

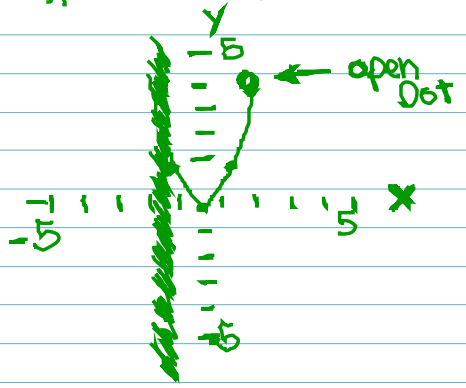
* Graph Domain-Restricted Functions.

#3.4.2

Graph the domain-restricted function

$f(x) = x^2$ if $-1 \leq x < 2$

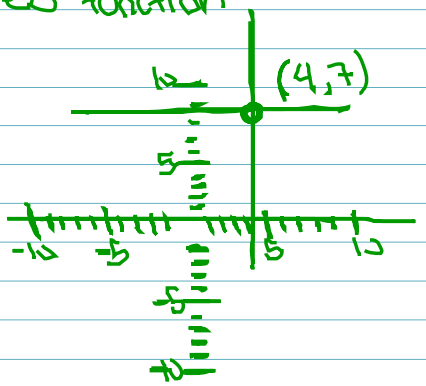
x	y
-2	4
-1	1
0	0
1	1
2	4



#3.4.3

Graph the domain-restricted function

$f(x) = 7$ if $x \neq 4$



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1/18/18.

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* Graph Domain-Restricted Functions.

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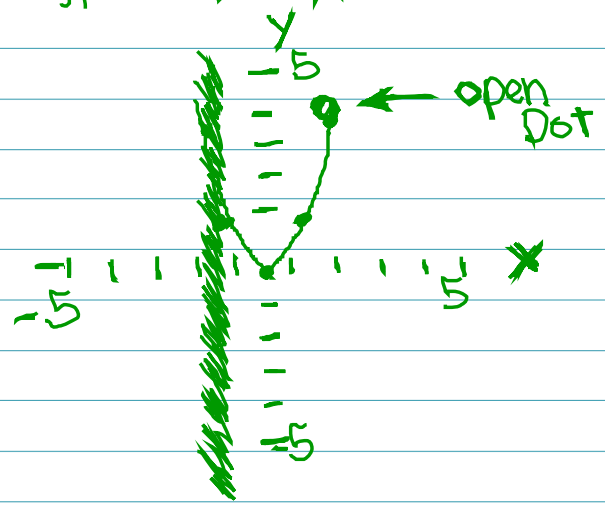
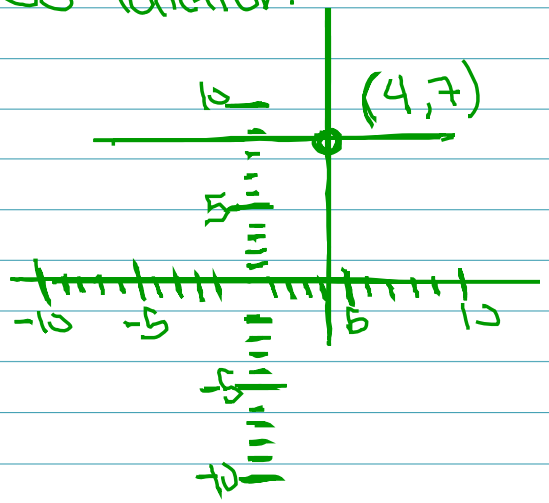


#3.4.3

Graph the domain-restricted function

$f(x) = 7$ if $x \neq 4$



#3.4.4

Graph the Domain-Restricted function

$f(x) = |x|$ if $-2 \leq x < 1$

x	-2	-1	0	1	2
$f(x)$	2	1	0	1	2

Evaluate Piecewise-Define functions

$$f(x) \begin{cases} x^2 & \text{if } x < 0 \\ 2 & \text{if } x = 0 \\ 3x+4 & \text{if } x > 0 \end{cases}$$

Find the followings

(a) $f(4) = (x=4)$ when $f(x) = 3x+4$ $\quad f(x) = 16$

(b) $f(-1) = (x=-1)$ when $f(x) = x^2$ $\quad f(-1) = 1$

(c) $f(0) = (x=0)$ when $f(x) = 2$ $\quad f(0) = 2$

Graph Piecewise-Define Functions

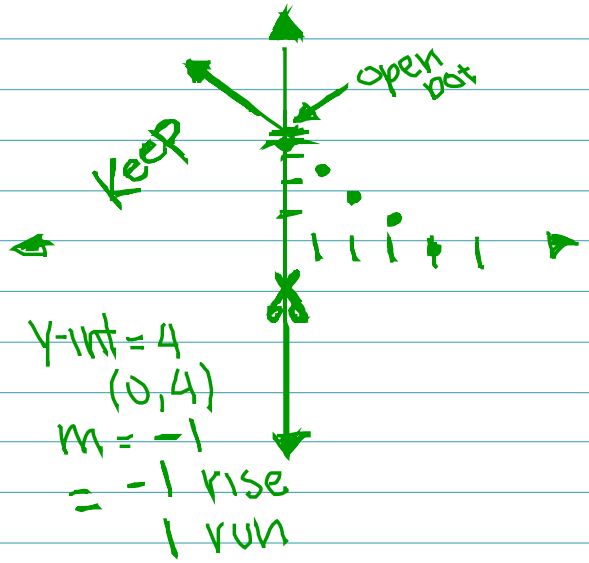
21 and 22

$$f(x) \begin{cases} 4-x & \text{if } x<0 \\ 3 & \text{if } x=0 \\ x^2 & \text{if } x>0. \end{cases}$$

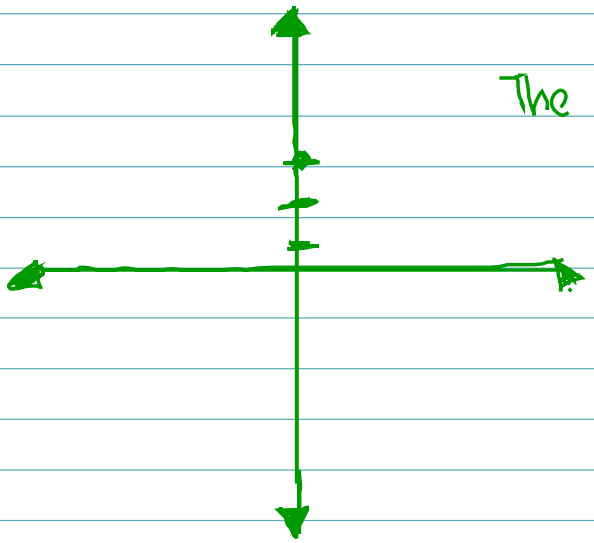
a) $f(x) = 4-x$ if $x<0$

$y = 4-x$

$y = -x+4$



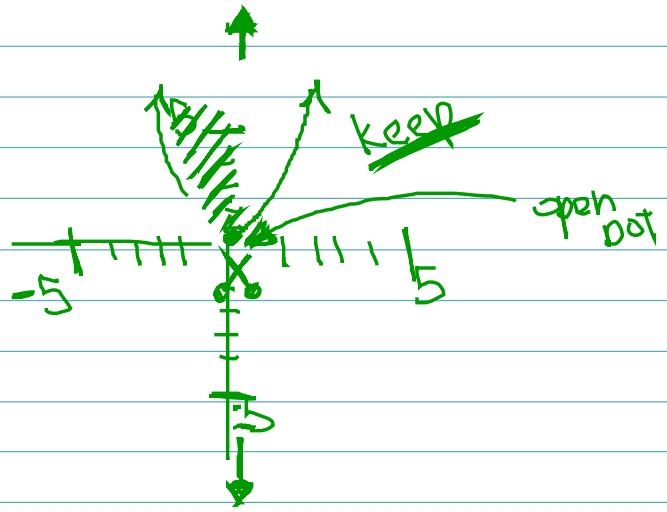
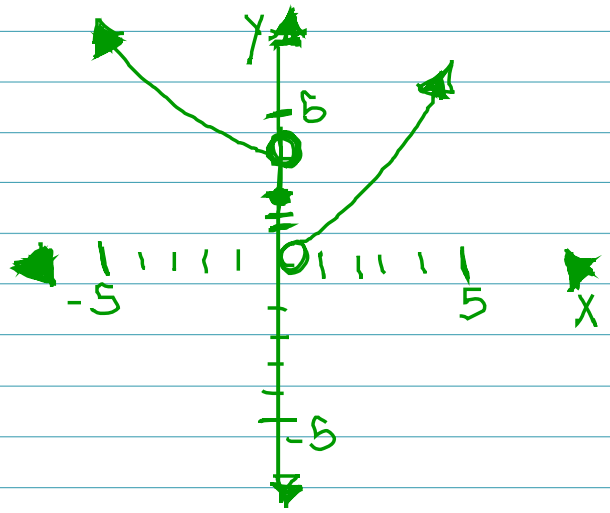
b) $f(x) = 3$ if $x = 0$



The only thing you keep is:

(0,3)

3) $f(x) = x^2$ if $x > 0$



All together