NAME: _Solutions_

Quiz 5
Dawson College
Applied Math (201-943-DW)
Date: Oct 27th 2011
Instructor: E. Richer
This quiz is marked out of 15 marks

Question 1. *(5 marks)*
(a) Find the equation of the line passing through the points $(3,1)$ and $(-1,5)$.

SLOPE $m = \dfrac{5-1}{-1-3} = \dfrac{4}{-4} = -1$

$y = -x + b$

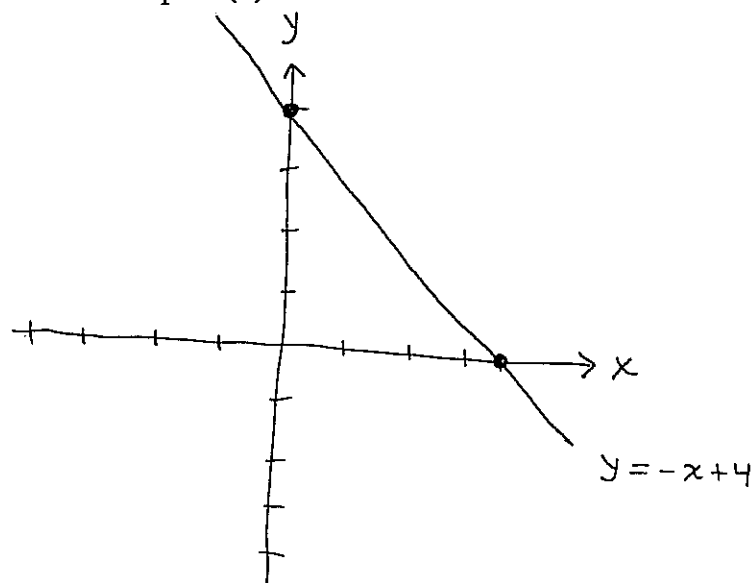Plug in a point :

$1 = -3 + b$

$b = 4$

EQUATION $y = -x + 4$

(b) Graph the equation of the line from part (a).

X-intercept
$y = 0$ $x = 4$

y-intercept
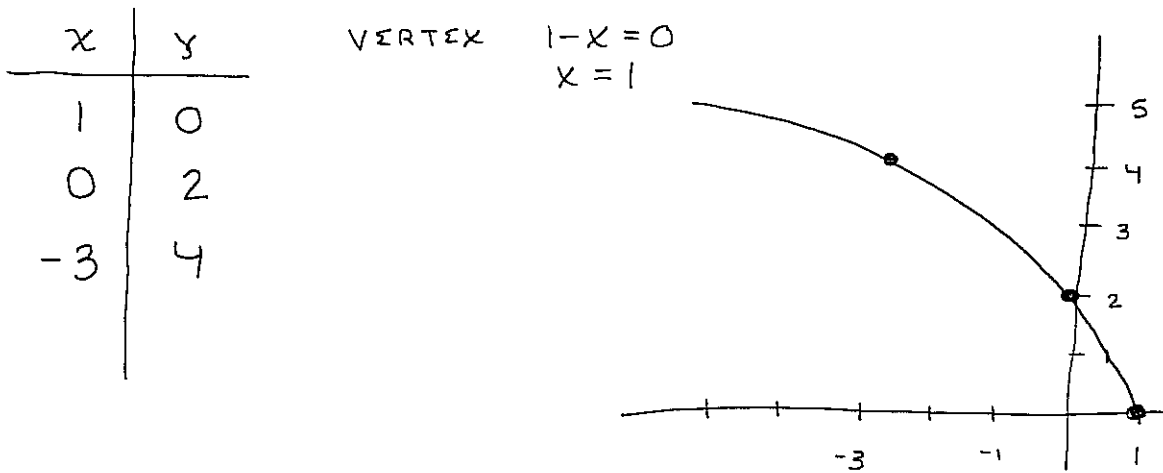$x = 0$ $y = 4$

$y = -x + 4$

Question 2. *(5 marks)*

(a) Graph the function $y = 2\sqrt{1-x}$. Indicate at least three points on the graph.

x	y
1	0
0	2
-3	4

VERTEX $\quad 1-x=0$
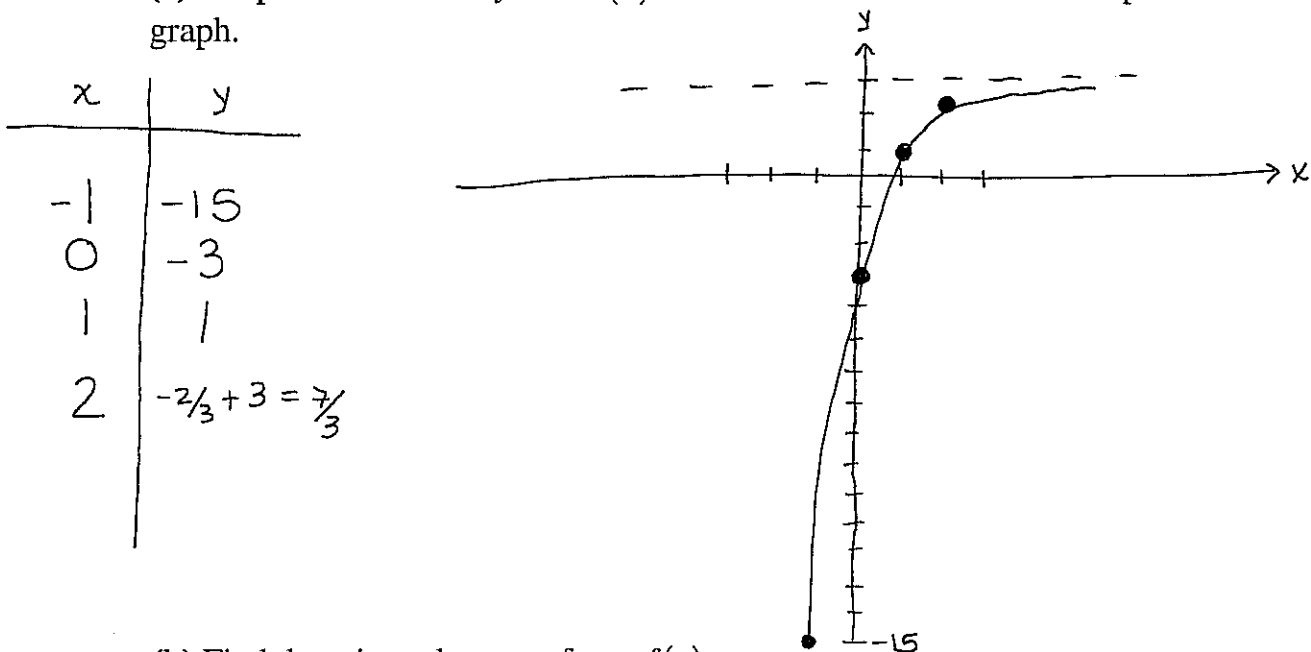$\qquad\qquad\quad x=1$

(b) Give the domain and range of the function in part (a).

DOMAIN $(-\infty, 1]$ $\qquad$ RANGE $[0, \infty)$

Question 3. *(5 marks)*

(a) Graph the function $y = -2(3)^{1-x} + 3$. Indicate at least three points on the graph.

x	y
-1	-15
0	-3
1	1
2	$-\frac{2}{3}+3 = \frac{7}{3}$

(b) Find domain and range of $y = f(x)$.

DOMAIN $\mathbb{R}$

RANGE $(-\infty, 3)$