

## Assignment 1 Solution

(1)

a)  $x = 1/3$

b)  $x = 49$

c)  $x = 0.5$

d)  $x = 8$

e)  $x = 32$

(2)

a)  $2x - y$

b)  $\frac{2x-y-1}{2y+1}$

(3)

a)  $s(t) = \sin(10t + \frac{\pi}{2}) + 2 \sin(5t + \frac{\pi}{2}) + 2 \sin(15t + \frac{\pi}{2})$

b)

	$\sin(10t + \frac{\pi}{2})$	$2 \sin(5t + \frac{\pi}{2})$	$2 \sin(15t + \frac{\pi}{2})$
A	1 V	2 V	2 V
f	5/ $\pi$ Hz	5/2 $\pi$ Hz	15/2 $\pi$ Hz
$\Theta$	$\pi/2$ rad	$\pi/2$ rad	$\pi/2$ rad

c) and d) see next page

(4)

a)  $C = 3.33$  kbps

b)  $C = 21.6$  kbps

(5) 6.03 km/hr

(3c) and (3d)

