



Princess Sumaya  
University  
for Technology

Princess Sumaya University for Technology  
King Abdullah II School of Engineering

EE27355

Communication Principles

Quiz #1

Thursday 26/2/2026

Name:.....



Section 1

Q.1) Sketch  $x(-t+2)$ ,  $x(1.5t+2)$ , and  $x(-1.5t-2)$  for the signal that is shown in Figure Q.1. [10-Points]

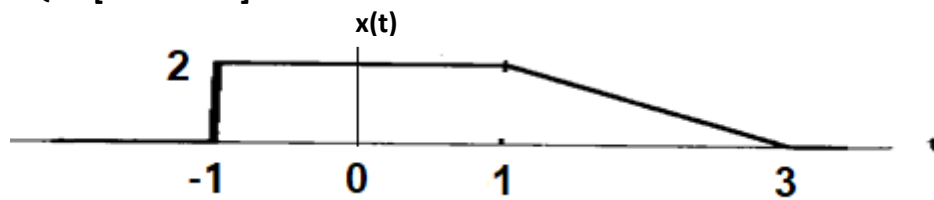


Figure Q.1

a: [3-Points]

$x(-t+2)$



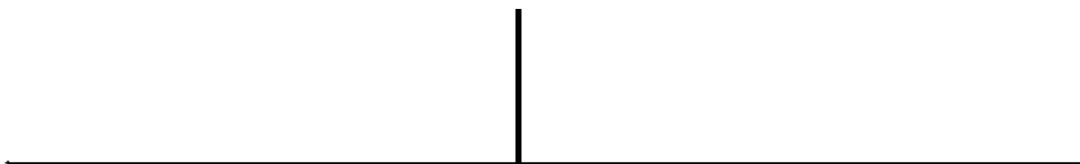
b: [3-Point]

$x(1.5t+2)$



c: [4-Points]

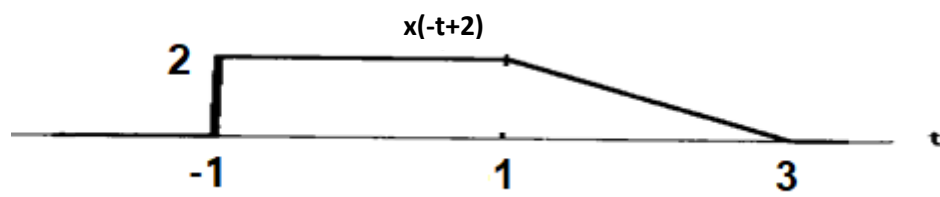
$x(-1.5t-2)$



a)

$-(t-2)$

Multiply by -1 then shift  $t=2$



$x - 1$

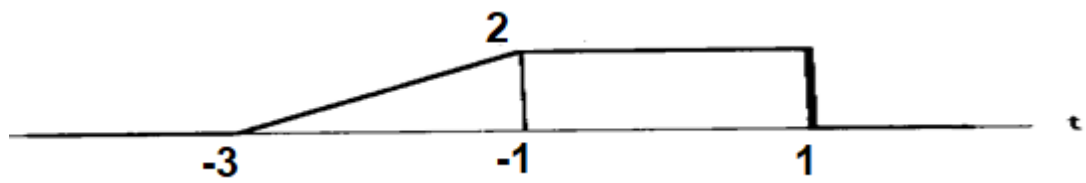
$x - 1$

$x - 1$

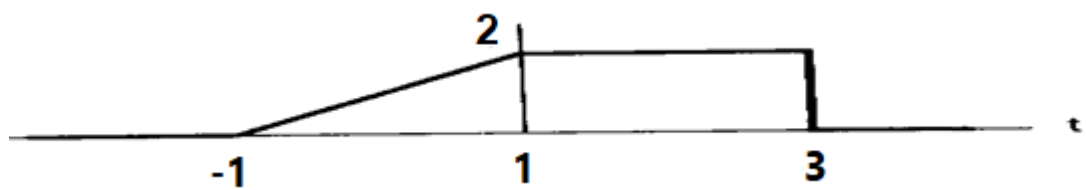
$= 1$

$= -1$

$= -3$



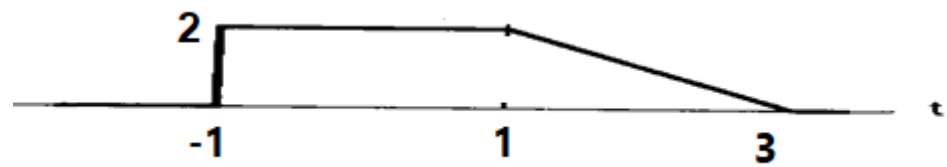
Then Shift Right by 2



b)  $x(1.5t+2)$

$(3/2)(t+(4/3))$

Multiply by  $2/3$  then shift  $t=-4/3$



$\times 2/3$

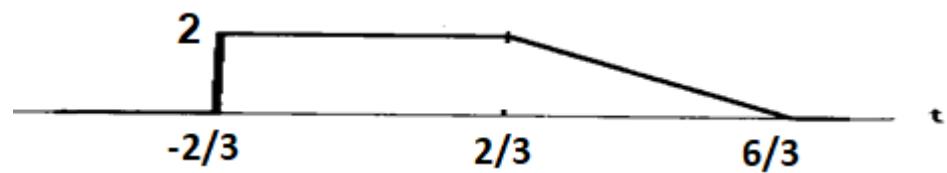
$\times 2/3$

$\times 2/3$

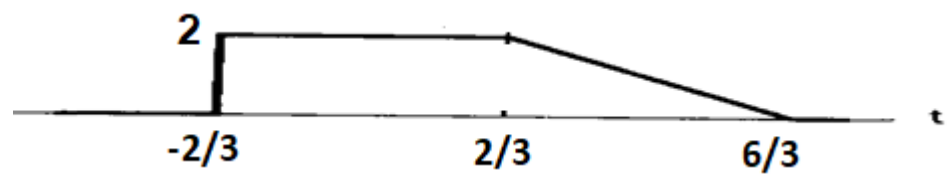
$= -2/3$

$= 2/3$

$= 6/3$



shift  $t=-4/3$



$-4/3$

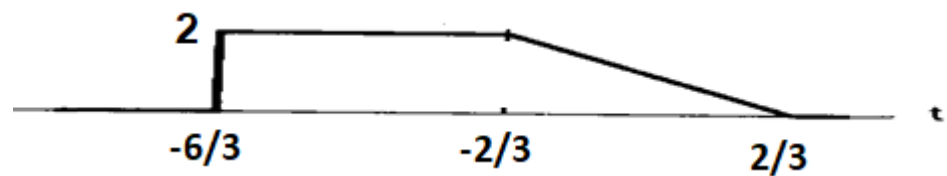
$-4/3$

$-4/3$

$= -6/3$

$= -2/3$

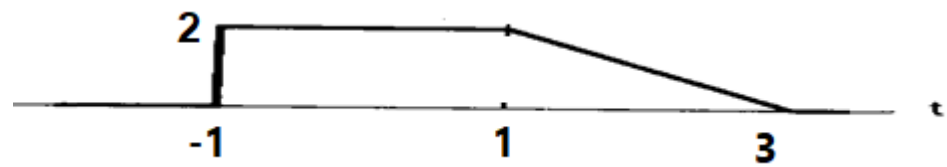
$= 2/3$



c)  $x(-1.5t-2)$

$(-3/2)(t+(4/3))$

Multiply by  $-2/3$  then shift  $t=-4/3$



$$x - 2/3$$

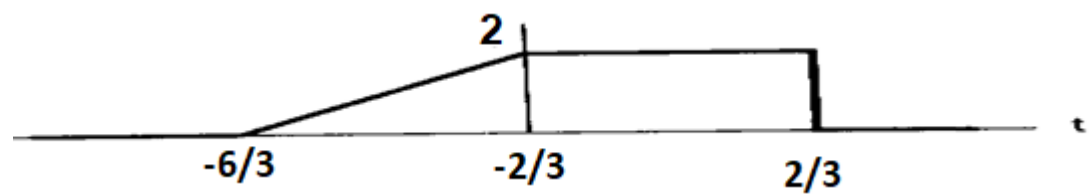
$$= 2/3$$

$$x - 2/3$$

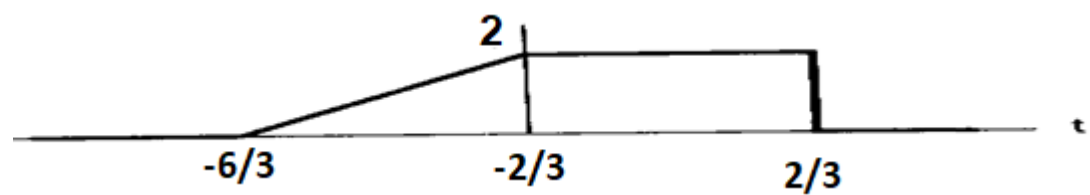
$$= -2/3$$

$$x - 2/3$$

$$= -6/3$$



shift  $t=-4/3$



$$-4/3$$

$$= -10/3$$

$$-4/3$$

$$= -6/3$$

$$-4/3$$

$$= -2/3$$

