# COMP.SGN.100 Introduction to Signal Processing
# Exercise 4 - Task 1, 2

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**Task 1**

Exercise 4

Task 1

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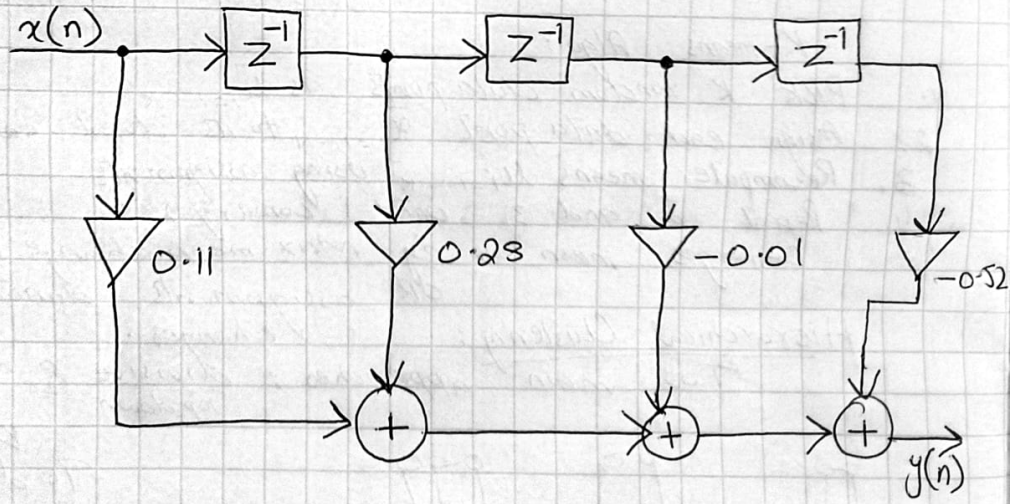
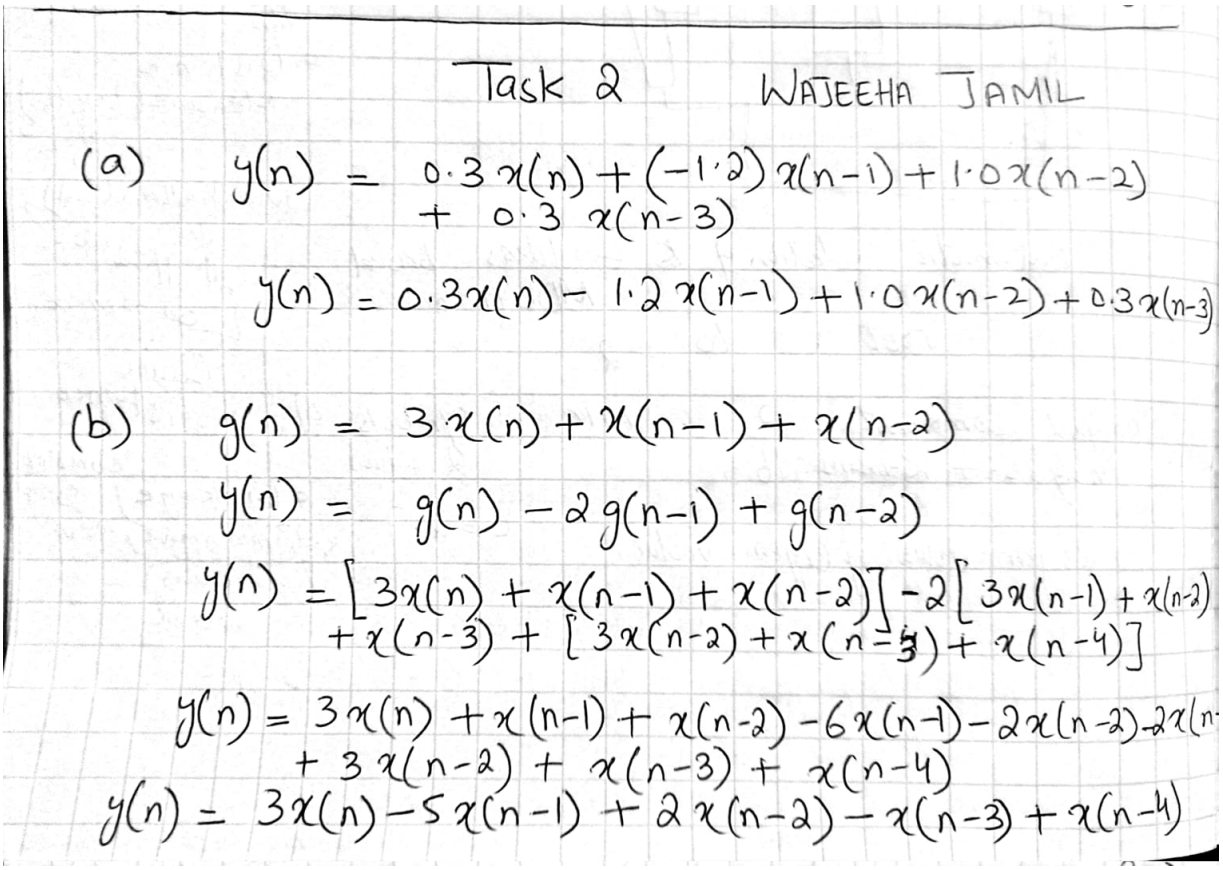
(a) $y(n) = -0.2427x(n) - 0.2001x(n-1) + 0.7794x(n-2) - 0.2001x(n-3) - 0.2427x(n-4)$

(b)



**Task 2**



Task 2 WAJEEHA JAMIL

(a) $y(n) = 0.3x(n) + (-1.2)x(n-1) + 1.0x(n-2) + 0.3x(n-3)$

$y(n) = 0.3x(n) - 1.2x(n-1) + 1.0x(n-2) + 0.3x(n-3)$

(b) $g(n) = 3x(n) + x(n-1) + x(n-2)$

$y(n) = g(n) - 2g(n-1) + g(n-2)$

$y(n) = [3x(n) + x(n-1) + x(n-2)] - 2[3x(n-1) + x(n-2) + x(n-3)] + [3x(n-2) + x(n-3) + x(n-4)]$

$y(n) = 3x(n) + x(n-1) + x(n-2) - 6x(n-1) - 2x(n-2) - 2x(n-3) + 3x(n-2) + x(n-3) + x(n-4)$

$y(n) = 3x(n) - 5x(n-1) + 2x(n-2) - x(n-3) + x(n-4)$