Inter $n < 1$

$x[n] = \{1, 5, 8, 4, 2\}$

a) $x[2n] = 5, 2$

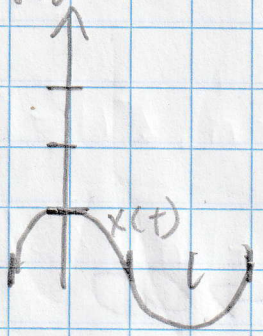
b) $x[n/2]$

$x[n/2] = \{1, 0, 5, 0, 8, 0, 4, 0, 2, 0\}$

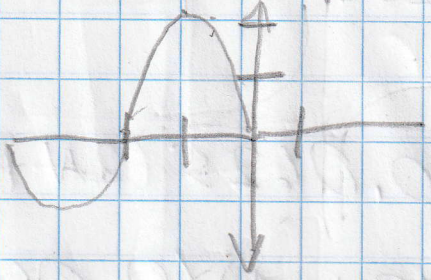
$x[n/2] =$

$x[2n] =$

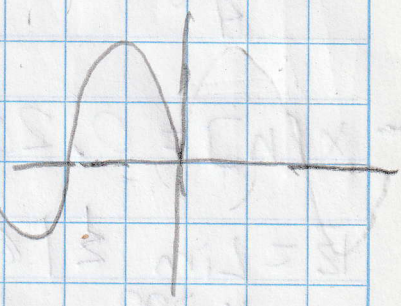
$x(t) \Rightarrow b$



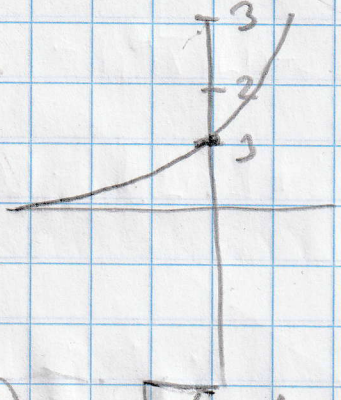
$x(t-2)+2 \Rightarrow a$



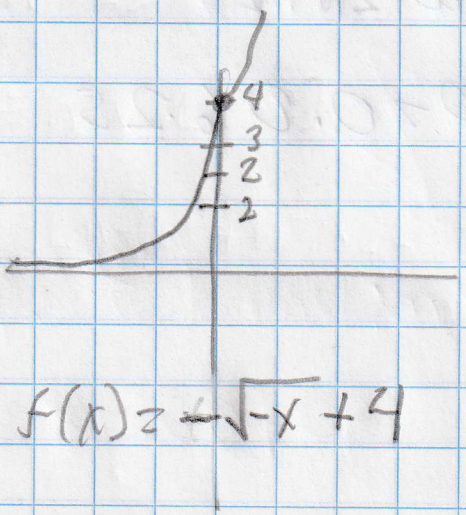
$c = -x(t+4)+2$



$-x(t+4)+2$



$f(x) = -\sqrt{-x} + 1$



$f(x) = -\sqrt{-x} + 4$

- $x(t) = e^{-2(t)} = \int_{-\infty}^{+\infty} |x(t)|^2 dt = \lim_{t\to\infty} \int_{-t/2}^{t/2} |e^{-2(t)}|^2 dt$

$\lim_{t\to\infty} \int_{-t/2}^{t/2} e^{-4t} dt = \int_{-t/2}^{t/2} -\frac{1}{4} e^{u} du = -\frac{1}{4}[e^{u}]_{2t}^{-2t}$

$\Rightarrow -\frac{1}{4}(e^{-2t} - e^{2t}) = \lim_{t\to\infty}\left(-\frac{1}{4}(e^{-2t} - e^{2t})\right)$

$\Rightarrow -\frac{1}{4}\left(\lim_{t\to\infty}(e^{-2t}) - \lim_{t\to\infty}(e^{2t})\right)$

$-\frac{1}{4}(0 - \infty) = \infty$ //

- $x[n] = 0.25 e^{j\pi/4n}$

$E = \lim_{N\to\infty} \sum |0.25 e^{j\pi/4N}|^2$

$E = |0.25|^2 = 0.0625(2N+1) \to \infty$

$P = \lim_{N\to\infty} \frac{1}{2N+1}(2N+1)(0.0625) \to 0.0625$

R/ P = 0.0625

Hexa $(4095)_{10}$

4095/2 = 2,047.5 | 1

2047/2 = 1,023.5 | 1
1,023/2 = 511.5 | 1
511/2 = 255.5 | 1
255/2 = 127.5 | 1
127/2 = 63.5 | 1
63/2 = 31.5 | 1
31/2 = 15.5 | 1
15/2 = 7.5 | 1
7/2 = 3.5 | 1
3/2 = 1.5 | 1
1/2 = 0.5 | 1

R/ FFF

$(1100\,1011\,1111)_2$

C B F F

$1\times2^{11}+1\cdot2^{10}+1\cdot2^{9}+1\cdot2^{8}+1\cdot2^{7}+1\cdot2^{6}+1\cdot2^{5}+1\cdot2^{4}+1\cdot2^{3}+1\cdot2^{2}+1\cdot2^{1}+1\cdot2^{0}$

$2048+1024+512+256+128+64+32+16+8+4+2+1$

$3072+512+256+128+64+32+16+8+4+2+1$

$3584+256+128+64+32+16+8+4+2+1$

$3840+128+64+32+16+8+4+2+1$

$3968+64+32+16+8+4+2+1$

$4032+32+16+8+4+2+1$

$4064+16+8+4+2+1$

$4080+8+4+2+1$

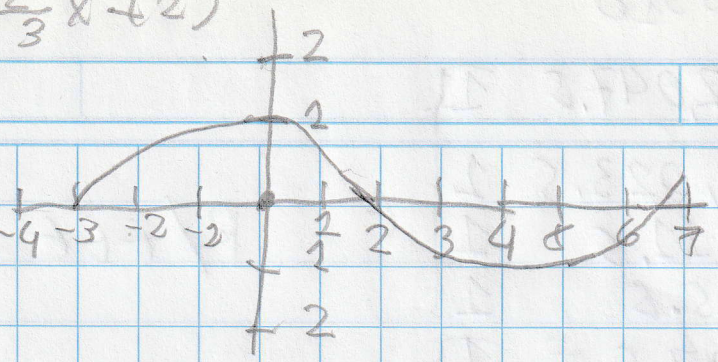
$4088+4+2+1$

$4092+2+1$

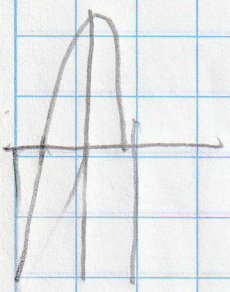
$4094+1 = 4095$

R/ CAFE

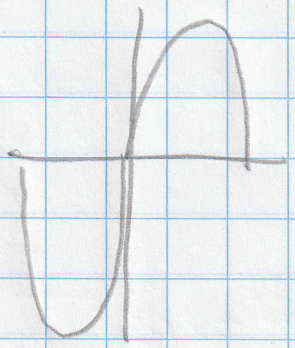
$f(x) = 2\,sen\left(\frac{2}{3}x + 2\right)$



Par



Impar



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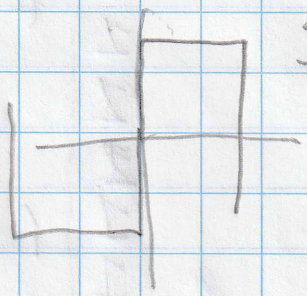
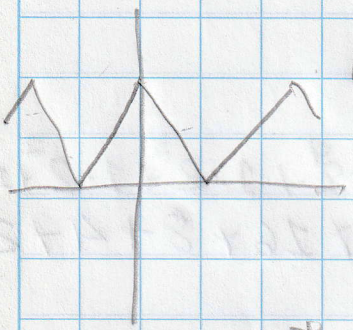
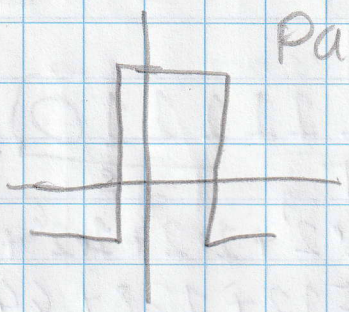


par



par



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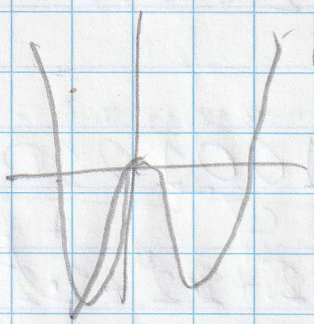
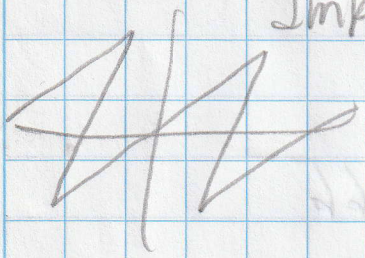


Impar



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