SSY042 16-08-24 Svar.

1a/ $y(t) = 2{,}5\cos\left(692t + \frac{\pi}{3}\right)$ V

b/ i/ $\Omega = \pi/20$

ii/ 40 st

2/ a/ $a = 0{,}6$

b/ $y[n] = 5\left(1 - 0{,}6^n\right)u[n]$

3/ $y(t) = \left(1 - \frac{5}{4}e^{-4t} + \frac{1}{4}e^{-8t}\right)u(t)$

4/ $P_x = \frac{1}{T}\int_0^T x^2(t)\,dt = \ldots = 1$

$P_x = \frac{A_0^2}{4} + \frac{1}{2}\sum_{n=1}^{\infty}\left(A_n^2 + B_n^2\right) = \ldots = \frac{1}{2}\left[\left(\frac{4}{\pi}\right)^2 + \left(\frac{4}{3\pi}\right)^2\right] = 0{,}90$

5/

Signal	DFT
$x_1[n]$	d
$x_2[n]$	a
$x_3[n]$	f
$x_4[n]$	c
$x_5[n]$	g