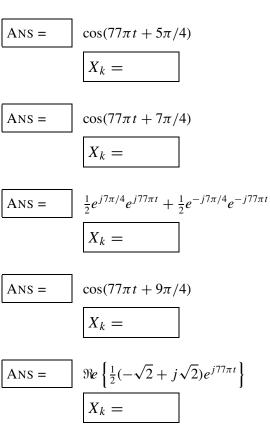
PROBLEM:

For each of the following signals, pick one of the representations below that defines *exactly* the same signal. Write your answer $x_1(t)$, $x_2(t)$, $x_3(t)$, $x_4(t)$, or $x_5(t)$, in the box next to each signal. In addition, write the complex amplitude (X_k) of the sinusoid for each case in the space provided.



POSSIBLE ANSWERS: Some of these answers can be used <u>more than once.</u>

If one answer is used twice, another one won't be used at all.

1.
$$x_1(t) = \frac{1}{2}e^{j\pi/4}e^{j77\pi t} + \frac{1}{2}e^{-j\pi/4}e^{-j77\pi t}$$

2.
$$x_2(t) = \Re e \left\{ e^{-j5\pi/4} e^{j77\pi t} \right\}$$

3.
$$x_3(t) = \cos(77\pi t - 3\pi/4)$$

4.
$$x_4(t) = \Re e \left\{ \frac{1}{2} e^{-j5\pi/4} e^{j77\pi t} \right\}$$

5.
$$x_5(t) = \Re e \left\{ \frac{1}{2} (\sqrt{2} - j\sqrt{2}) e^{j77\pi t} \right\}$$