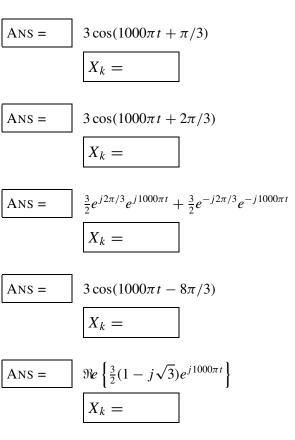
PROBLEM:

For each of the following sinusoidal 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 (phasor) (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.
$$x_1(t) = 3\cos(1000\pi t + 8\pi/3)$$

2.
$$x_2(t) = \Re e \left\{ \frac{3}{2} e^{-j\pi/3} e^{j1000\pi t} \right\}$$

3.
$$x_3(t) = 3\cos(1000\pi t - \pi/3)$$

4.
$$x_4(t) = \Re e \left\{ \frac{3}{2} (1 + j\sqrt{3}) e^{j1000\pi t} \right\}$$

5.
$$x_5(t) = \Re e \left\{ 3e^{-j2\pi/3}e^{j1000\pi t} \right\}$$