YOUR NAME(S): _____

PROB 1: Use the following phasor transform to find the requested quantities for each of the given signals:

Phasor Transform: $a\cos(\omega t)+b\sin(\omega t)\xleftrightarrow[P[\,]]{} a-bi$ where $i\equiv\sqrt{-1}$

a) Find the phasor, $a - bi$, for the following signal:

$$3\cos(1000t)+4\sin(1000t)\xleftrightarrow[P[\,]]{}\_\_\_\_\_ .$$

b) Find the phasor for the following signal. Hint: first use the trigonometric identity $\cos(A+B)=\cos(A)\cos(B)-\sin(A)\sin(B)$.

$$8\cos(440t+\phi)\xleftrightarrow[P[\,]]{}\_\_\_\_\_ .$$

Takeaway: We can find the phasor for a sinusoid with a phase shift.