1. Given \( \tan \theta = \frac{3}{4} \), and \( \pi \leq \theta \leq 2\pi \), compute the following:

\[
\sin \theta = -\frac{3}{5} \quad \cos \theta = -\frac{4}{5} \\
\csc \theta = -\frac{5}{3} \quad \sec \theta = -\frac{5}{4} \\
\cot \theta = \frac{4}{3}
\]

The value of \( \tan \theta \) tells us that our triangle is in \( QIV \) or \( QIII \); \( \pi - \theta \geq 2\pi \) eliminates \( QIV \); therefore, we draw our triangle in \( QIII \).

2. Simplify and compute the logarithms below:

(a) \( \ln(e^{x^2}) - \ln(e^2) \) (2 pts)

\[
\ln\left(e^{x^2}\right) - \ln\left(e^2\right) = \ln\left(\frac{e^{x^2}}{e^2}\right) = \ln\left(e^{\pi - 4}\right) = \pi - 4
\]

(b) \( \log(2) + \log(25) \) (1 pt)

\[
\log(2) + \log(25) = \log(50) = \log(10 \cdot 5) = \log(10) + \log(5) = 1 + \log(5)
\]