1. a. Figure 3 illustrates the market for pizza. The equilibrium price is \( P_1 \), the equilibrium quantity is \( Q_1 \), consumer surplus is area \( A+B+C \), and producer surplus is area \( D+E+F \). There is no deadweight loss, as all the potential gains from trade are realized; total surplus is the entire area between the demand and supply curves—\( A+B+C+D+E+F \).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{Figure 3}
\end{figure}

b. With a $1 tax on each pizza sold, the price paid by buyers, \( P_B \), is now higher than the price received by sellers, \( P_S \), where \( P_B = P_S + $1 \). The quantity declines to \( Q_2 \), consumer surplus is area \( A \), producer surplus is area \( F \), government revenue is area \( B+D \), and deadweight loss is area \( C+E \). Consumer surplus declines by \( B+C \), producer surplus declines by \( D+E \), government revenue increases by \( B+D \), and deadweight loss increases by \( C+E \).