b. From equation 1, we have $P[G \text{ and } U] = \frac{36}{957}$

Probability $P[G]$ is the number of Gold metal winners, divided by the total number of winners

$$P[G] = \frac{302}{957}$$

Therefore Probability of U given G is shown below,

$$P[U|G] = \frac{P[G \text{ and } U]}{P[G]} = \frac{36/957}{302/957}$$

$$= \frac{36}{302}$$

$$\boxed{P[U|G] = 0.1192}$$

Q14. GIVEN:

$$P[A] = \frac{10}{100} = 0.1$$

$$P[B] = \frac{5}{100} = 0.05$$

and $P[A \cap B] = \frac{0.8}{100} = 0.008$

Probability that texture is the defective given that strip failing the length test, ie

$$P[B|A] = \frac{P[B \cap A]}{P[A]}$$

$$= \frac{0.008}{0.1}$$

$$\boxed{P[B|A] = 0.08}$$