3.5

i)

$\bar{x} = 502\ g \qquad P(x < 500) = ?$

$\sigma = 14\ g$

$$P(x < 500) = \frac{1}{\sigma\sqrt{2\pi}} \int_{-\infty}^{500} e^{-\frac{(x-\bar{x})^2}{2\sigma^2}} \, dx$$

$P(x < 500) = 0.4432 \rightarrow 44.32\%$

ii)

$$P(530 \leq x) = \frac{1}{\sigma\sqrt{2\pi}} \int_{530}^{\infty} e^{-\frac{(x-\bar{x})^2}{2\sigma^2}} \, dx$$

$P(530 \leq x) = 0.02275 \rightarrow 2.28\%$

$1000 \cdot 0.02275 = 22.75$

En 1000 maletas se espera que 22 tengan mínimo 530g