

2. Mean 45 minutes

Standard deviation 8 minutes

$$P(43 < X < 46)$$

$$P(X > 43) \quad \text{and} \quad P(X < 46)$$

$$P(X > 43)$$

$$\frac{43 - 45}{8} = \frac{-2}{8}$$

$$\begin{array}{l} -0.25 \\ \text{from the table} \\ = 0.40129 \end{array}$$

Similarly $P(X < 46)$

$$\frac{46 - 45}{8}$$

$$\frac{1}{8}$$

$$\begin{array}{l} = 0.13 \\ \text{from the table} \\ 0.4483 \end{array}$$

~~the~~ Subtract the upper limit by lower limit

$$\begin{array}{r} 0.4483 \\ - 0.40129 \\ \hline = 0.04701 \end{array}$$