1. The following box and whisker plot shows the number of text messages sent by Kevin and his co-workers in a typical work day.

(a) Find the value of the interquartile range
(b) One worker sent $p$ messages, where $p>18$. Given $p$ (4 marks) is an outlier, find the least value of $p$.

Mark scheme:
(a) $Q_{3}-Q_{1}=18-8=10$
(M1)(A1)
(b) $\mathrm{IQR} * 1.5+Q_{3}$

$$
\begin{align*}
& =(10)(1.5)+18  \tag{M1}\\
& =15+18  \tag{A1}\\
& =33  \tag{A1}\\
& p=33 \tag{A1}
\end{align*}
$$

