What scores separate the middle 90% of test takers from the bottom and top 5%? \( \mu = 516, \sigma = 11.6 \)

\[
\begin{align*}
1 - 0.9 &= 0.1 \\
0.1 \div 2 &= 0.05
\end{align*}
\]

Table values:

\[
\begin{align*}
0.0495 & \quad z = -1.65 \\
0.0305 & \quad z = 1.64
\end{align*}
\]
(c) Find the probability that between 3 and 4 patients inclusive experienced insomnia.

\[ P(3 \leq X \leq 4) = P(3) + P(4) \]

\[ = \boxed{0.639} \]

(d) Could it be unusual to find 4 or more patients who experienced insomnia as a side effect why?

\[ 1 - 0.9841 = 0.0159 \]

Yes, b/c it is less than 5%.
Q 6.3

(a) \( p(10) \) = \( \frac{\lambda^{10}}{10!} e^{-\lambda} \) = 0.074

(b) \( p(1 \leq X \leq 10) = p(0) + p(1) + \ldots + p(9) \) = 0.8305

(c) \( p(X > 10) = 1 - p(X \leq 10) = 0.1695 \)

(d) \( p(7 \leq X \leq 9) = p(7) + p(8) + p(9) = 0.3808 \)