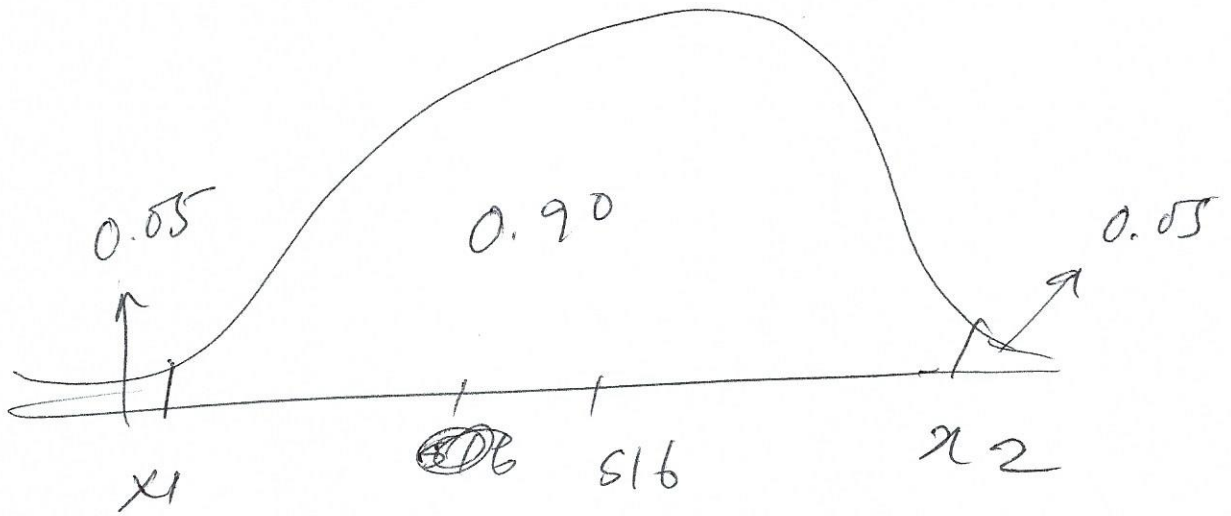


4/4/2019

72 exp:

What scores separate the middle 90% of test taker from the bottom and top 5%? $\mu = 516, \sigma = 116$



$$1 - 0.9 = 0.1$$

$$0.1 \div 2 = 0.05$$

| Table values | |
|--------------|-------------|
| 0.0495 | $z = -1.65$ |
| 0.0505 | $z = 1.64$ |

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6.2-38 CW

(c) Find the probability that between 1 and 4 patients inclusive experienced insomnia.

$$P(1 \leq X \leq 4) = P(1) + P(2) + P(3) + P(4) \\ = \boxed{0.639}$$

(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%.

#6.3

Q No- 8: The random variable X follows a poisson process with the given mean.

$\mu = 7$, Compute $\frac{\mu^x}{x!} e^{-\mu}$.

$$(a) P(10) = P(10) = \frac{7^{10}}{10!} e^{-7} = \boxed{0.071}$$

$$(b) P(X < 10) = P(0) + P(1) + \dots + P(9) = \boxed{0.8305}$$

$$(c) P(X > 10) = 1 - P(X < 10) = \boxed{0.1695}$$

$$(d) P(7 \leq X \leq 9) = P(7) + P(8) + P(9) = \boxed{0.3808}$$