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7. Complete the following assignment prior to Meeting #20:

A. Study our notes from Meeting #19.

B. Comprehend Jim's sample response to Quiz 19.

C. Comprehend Entry #038 & #39A–B of our *Glossary*.

D*. Please solve the following problems; display the computations, and upload the resulting pdf document on the appropriate Canvas assignment link:

The diameter of flat metal disk manufactured by a factory is a random number between 4 and 4.5. What is the probability that the area of such a flat disk chosen at random is at least 4.41π ?

Continuous?

E. From the Video Page of *Canvas*, view with comprehension the video names "intro to discrete random variables and discrete probability distributions."

F. Comprehend Jim's sample responses to the homework prompts that are posted on *Canvas*.

D) $A = \pi r^2$ $P(\text{Area}) \geq 4.41\pi \rightarrow P(\text{diameter} \geq 4.2) = ?$

$\frac{4.41\pi}{\pi} = \frac{\pi r^2}{\pi}$

$\sqrt{4.41} = \sqrt{r^2}$

$2.1 = r$

diameter $= 4.2$

Since we don't know if this is a normally distribution and we don't know the population mean and standard deviation, I don't think we can solve this problem.

After looking at the sample response, I see that I was thinking too hard about this problem. This problem assumes that each number between 4 and 4.5 is equally likely.

$P(\text{diameter} \geq 4.2) = \frac{4.5 - 4.2}{4.5 - 4} = \boxed{\frac{3}{5}}$