

6. Complete the following assignment prior to Meeting #24:

- B. Comprehend Jim's sample response to Quiz 23.
- C. Comprehend the following Entries 045 & 046A-C from our glossary
- D\*. Please solve the following problem; display the computation and upload the resulting pdf document on the appropriate Canvas assignment link:

For an experiment  $x$  is randomly drawn from  $\mathbb{R}$ . Given  $A$  is the event that  $x = 0 \wedge$   
 $B$  is the event that  $x \in (-0.0001, 0.0001)$ , compute  $p(A | B)$ .

- E. From the Video Page of *Canvas*, view with comprehension the videos named "intro continuous prob distributions" and "mmContinuous Random Variables Probability Density Functions."
- F. Comprehend Jim's sample responses to the homework prompts that are posted on *Canvas*.

$D^*)$

$$P(A) = \frac{1}{|\mathbb{R}|} = \frac{1}{\infty} \approx 0$$

$$P(B) = \frac{\text{number of elements in } (-0.0001, 0.0001)}{|\mathbb{R}|} = \frac{\infty}{\infty} \approx 0, \text{ but is } > 0$$

↑  
"Bigger"  $\infty$

$$P(A|B) = \frac{P(A \cap B)}{P(B)} = \frac{0}{\text{an } x > 0} = \boxed{0}$$