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AP STATISTICS – MS. KLIMCZUK

**Chapter 10 Questions (From Notes)**

1. What is the most important aspect of randomness?

1. Pick a number “randomly” below and write it down:

1 2 3 4

Was this really random? Why or why not?

1. How do you think that we can select numbers at random?
2. What is it about chance outcomes being random that makes random selection seem fair? (Two things).
3. Give an example of an outcome that would be random. Explain why it is random.
4. How can we generate random numbers so that they are truly random?
5. Do you think shuffling cards will produce results that are random? Why?
6. Suppose a cereal manufacturer puts toys in a box. 20% of the boxes contain temporary tattoos, 30% contain compasses, and the rest are filled with rings. You want all three prizes.



1. How many boxes will you need to buy? How can we answer a question like this?
2. One way is to buy hundreds of boxes of cereal to see what may happen. But let’s not do that. Instead, consider using a random model. Why do you think it has to be random?
3. Why are we using a model?
4. We are going to use a simulation. How does a simulation mimic reality?
5. Each time you obtain a simulated answer to your question is called a trial. What is each trial in this situation?
6. What are all the possible outcomes for this trial?
7. We cannot just pick one of these at random because they are not all equally likely. It is very hard to guess how many boxes you would need to open. We need to now do a simulation on this to give us more of an idea. How do you think we can do this?
8. There are 7 simulation steps. Explain how each one applies to this situation?
9. Identify the component to be repeated.
10. Explain how you will model the component’s outcome.
11. Explain how you will combine the components to model a trial.
12. State clearly what the response variable is.
13. Run several trials.
14. Collect and summarize the response of all the trials.
15. State your conclusions.

**Answers from Just Checking Box on Pg 272:**