

Textbook Activity  
Day 3

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These questions will be completed by the student and will count as class time. The students will be responsible for completing the work related to these activities and this work will count as attendance.

**This work is due first thing during class on Day 3. Failure to turn in this work will cause you to be 2 hours out without an excuse.**

Directions:

Read Chapters 4 of EYCLS, pages 61-71

Please use the lecture slides, Excel calculator, and your textbook to answer the following questions:

1. Define "event" and give an example of one.

AN OUTCOME OF AN EXPERIMENT OR SURVEY.

EX. ROLLING A DIE AND GETTING A NATZO

2. Define "random event" and give an example of one.

SOMETHING THAT IS UNPREDICTABLE.

EX. THE PROBABILITY OF CHOKING ON A CHICKEN NUGGET  
FOR THE REST OF YOUR LIFE

3. Define "probability"

A NUMBER THAT REPRESENTS THE CHANCE THAT A  
PARTICULAR EVENT WILL OCCUR FOR A RANDOM  
VARIABLE.

4. What is the first rule of probability?

THE PROBABILITY OF AN EVENT MUST BE BETWEEN  
0 AND 1.

5. What is the second rule of probability? Please provide an example.

THE EVENT THAT "A" DOES NOT OCCUR IS CALLED  
"A COMPLEMENT" (AKA "NOT A") AND IS GIVEN SYMBOL  
(A'). EX. THE COMPLEMENT OF ROLLING A 6 ON A  
DIE IS NOT GETTING A FACE WITH A 6 - AKA 5/6.

6. What is the third rule of probability? Please provide an example.

IF TWO EVENTS A AND B ARE MUTUALLY EXCLUSIVE,  
THE PROBABILITY OF BOTH EVENTS A AND B OCCURRING  
IS 0. ERGO, EVENTS CANNOT OCCUR AT THE SAME  
TIME. EX. YOU CANNOT ROLL A 3 AND A 6 AT THE  
SAME TIME WITH A DIE

7. What is the Classical Approach to Probability? Please provide an example

ASSIGNING PROBABILITIES BASED ON PRIOR KNOWLEDGE  
OF THE PROCESS INVOLVED.

EX. ROLLING A DIE AND ASSIGNING PROBABILITY  
TO ROLLING A CERTAIN NUMBER

8. What is the Empirical Approach to Probability? Please provide an example.

ASSIGNING PROBABILITIES BASED ON FREQUENCIES  
OBTAINED FROM EMPIRICALLY OBSERVED DATA.

EX. PROBABILITIES DETERMINED BY THE USE  
OF SURVEYS.