**GSE PreCalculus Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**WS: Expected Value Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Day \_\_\_\_\_\_**





1

1. 
2. 
3. 
4. 



2. 
3. 

A bean bag toss game has the following rules:

* You get 3 bean bags to toss into the clown’s mouth.
* If you make 3 successful tosses, then you win a large prize.
* If you make 1 or 2 successful tosses, then you win a small prize.
* If you make 0 successful tosses, then you do not win a prize.
* It costs $1 to play (3 bean bag tosses).

1. What is the probability of each outcome?
   1. 3 successful tosses?
   2. 2 successful tosses?
   3. 1 successful toss?
   4. 0 successful tosses?
2. If 200 people play the bean bag toss game, how many of each prize (small and large) should you expect to give away?
   1. Small prizes?
   2. Large prizes?
3. If a small prize costs $0.50 and a large prize costs $1, how much profit would you expect the game to make from the 200 players?

You polled 100 people are and found out that 45 are taking Math, 35 are taking Math and English, and 15 are taking neither.

13. How many students are taking math only?

14. P(student takes english only)?

15. P(student takes math and english)?

16. P(student takes math or english)?

17. P(student takes neither)?

You are ordering a pizza and have narrowed your choices to the items in the table below.

|  |  |  |
| --- | --- | --- |
| Size  Medium  (0.20)  Large  (0.70)  X-Large  (.10) | Crust  Thin  (0.6)  Pan  (0.4) | Toppings  Pepperoni  (0.2)  Veggie  (0.3)  Cheese  (0.5) |

18. How many combinations are there?

19. P(Medium, Thin, Veggie)?

20. P(Large, Pan, any type)?

21. P(X-Large)

22. If you order 20 pizzas, how many do you expect to be Large, Thin, Pepperoni?

**Classes**

Smith- 1st, 2nd, 3rd, 4th, 6th 1st, 2nd, 3rd are morning classes

Johnson- 1st, 3rd,4th, 5th, 6th  4th, 5th, 6th are afternoon classes

Hill- 1st, 2nd, 3rd, 5th, 6th

1. What is the probability of getting a morning class?
2. What is the probability of getting a class during 2nd period?
3. All of the morning classes are filled, what is the probability of getting Hill in the afternoon?
4. All of Mr. Smith’s classes are full. What is the probability of getting a morning class with Mrs. Hill?