

Each WA is worth 10 points. Work right on these pages, then upload or give to me in class. You can work together or see a tutor, but NEVER copy. This WA is for a grade, so dishonesty or cutting corners may earn a 0 for all involved.

1. [1 pt] Clearly define the term *geometric probability*, including a formula for how we compute it.

2. [3 pts - 1 each] Several Mahoning County 4-H Clubs held a joint Fun Walk to raise money. One hundred twenty walkers - 80 club members and 40 supporters walked laps at the fairgrounds track. Some walkers completed 40 laps, some completed 50, and so on. For each number of laps, the chart below shows how many club members walked that many laps, and also how many supporters walked that many laps:

Number of laps completed	by	Number of club members	and	Number of supporters
40		15		8
50		20		15
60		16		12
80		24		4
100		5		1

- (a) Find the probability (as decimal to 3 places) that a walker completed more than 80 laps and was a club member.
- (b) Find the probability (as decimal to 3 places) that walker was a supporter who completed under 60 laps or was a club member.
- (c) Find the probability (as decimal to 3 places) that a walker was a supporter (any number of laps) or someone who completed fewer than 50 laps.
3. [1 pt - 0.5 each] An experiment involves choosing a ball at random from a bowl containing TWENTY red balls, numbered 1, 2, ..., 20 and TEN black balls, numbered 1, 2, ..., 10. List the favorable outcomes for each event.
- (a) Getting a ball that's red and has a multiple of 5 on it
- (b) Getting a ball that's black or has a composite number on it
4. [0.5 pts] The probability that Julianna will win her tennis match against Chris, based on past games they've played against each other, is $\frac{3}{8}$. What's the probability that Julianna won't win, and what is the classroom/textbook term for this kind of probability situation?

5. [0.5 pt] What does the term *uniform sample space (SS)* mean?

6. [2 pts] Draw a single spinner so that all of the following conditions are true.

- (a) The probability of stopping on a number 10, 11, 12, 13, 14, 15 is 1.
- (b) The probability of stopping on a prime number is $1/2$.
- (c) The probability of stopping on a 10 is half that of stopping on a 15.
- (d) The probability of stopping on a multiple of 7 is 0.

7. [2 pts] Draw and label a single spinner that simultaneously has all these qualities:

- (a) The probability of landing on a fraction is 1.
- (b) The probability of landing on a fraction in lowest terms is $2/3$.
- (c) The probability of landing on a fraction greater than 1 is $1/2$.
- (d) The probability of landing on a unit fraction (numerator = 1) is 0.