**Chapter 12 Quiz – I mean, like this is it! Geometry is OVER! There is nothing more to do! Seriously, nothing. Finish this and then you can … go home. Or go outside. Or whatever. Just no more Geometry. Do you understand what I’m saying? This is it!**

 **Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1.** A card is selected at random from the set of cards below.



A sample space for the experiment is {Q, R, S, T, U, V, X}. Let *W* represent the event “the card is white,” let *H* represent “the card is shaded,” and let *M* represent “the number is more than 6.” Select (circle) **all** that apply. *Not just one. More than one. Could be two, three. Could even be all six. But seriously what is the “probability” of that happening, right?*

**A** The event *H* is {Q, S, U, V, X}.

**B** The event *H* and *M* is {Q, S, U, V}.

**C** The event *H* or *M* is {Q, S, T, U,
V, X}.

**D** The events H and W are mutually exclusive

**E** *P*(*W* and *H*) = 0

**F** The events M and H are independent

**2.** Four percent of the students at Washington High School are in Math Club (*wait – only 4%? What is wrong with these kids at Washington High School? Someone needs to go straighten them out)*, 7% are in Computer Club, and 3% are in both. If a student is selected at random, what is the probability that the student is in Math Club or Computer Club?

**A** 7% **C** 11%

**B** 8% **D** 14%

**3.** In a survey of students, 80% were girls and 20% were boys. *(wait – what? Where are all the boys? Guys, come on! We know women are going to rule us all one day, but seriously – a survey? We need to represent!!)* Of the girls surveyed, 40% were wearing sneakers. If a surveyed student is selected at random, what is the probability that the student is a girl wearing sneakers?

**A** 8% **B** 16% **C** 32% **D** 40%

**4.** A random sample of voters were asked whether they plan to vote for Doris Brown for mayor. *(See, the women are about to do this thing! Oh hang on. We already have a female mayor, don’t we. J/k.)*

**Plans to Vote for Doris Brown**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Yes** | **No** | **Totals** |
| **Men** | 246 | 237 | 483 |
| **Women** | 288 | 236 | 524 |
| **Totals** | 543 | 464 | 1,007 |

One surveyed person is selected at random. Select all that apply. Percents are rounded.

**A** The probability that the person is a man is 48%.

**B** The probability that the person plans to vote for Doris Brown is 54%.

**C** Given the person plans to vote for Doris Brown, the probability that the person is a man is 51%.

**D** Given the person is a man, the probability that the person plans to vote for Doris Brown is 51%.

**E** The events “is a man” and “for Doris Brown” are independent.

**F** The events “is a woman” and “for Doris Brown” are independent.

Bonus 1: What is the complement of a compliment? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bonus 2: What is the probability that I run a marathon this summer GIVEN THAT I basically hate running? Like seriously, I hate it! \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bonus 3: Any last words of wisdom about this crazy, awful year that’s finally ending? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_