

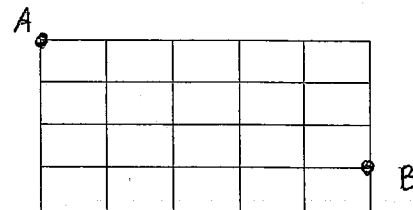
# Washington State Math Championship 2007

## Probability & Statistics – 5<sup>th</sup> grade

Give all probabilities as reduced fractions unless otherwise stated.

1. Albert Einstein stated, "Once the mind has been stretched, it will never go back to its original shape." If you randomly select a letter from this quote, what is the probability it is NOT a vowel?
2. A single card is drawn randomly from a deck of cards. What is the probability the card chosen does NOT show a prime number?
3. Find the median of the set of all positive two-digit multiples of seven.
4. A pair of dice is rolled once. A person can roll "doubles" by having the same number show on both dice at the same time. What is the probability their sum is six or eight but not "doubles"?
5. Five state wrestling champs had an average weight of 168 lbs. The lightest wrestler weighed 122 lbs, the heaviest 210 lbs and another was listed at 165 lbs. What must be the average weight of the other two?
6. Kelli's cookie jar contains 12 chocolate chip cookies, 6 oatmeal, 6 peanut butter, and 8 sugar cookies. What is the probability she randomly chooses a chocolate chip cookie, eats it, then randomly chooses a sugar cookie?
7. The temperature at Whistler at 7:00 am was at the daytime low of *negative* 4° F. Later that day, at 2:30 pm, the daytime high temperature was 36° F. What was the average hourly increase in temperature for that day?
8. Eight students at Far North Middle School are in the running for the three similar positions of "student mediators." How many different outcomes of three winning students are possible?

9. Mr. Chance, a math teacher in a large city school, rides his bike to work each day. If he lives at point A and the school is at point B, how many *different* routes might he take if he is always traveling south and/or east?



10. At the Northwest Washington Fair, balloons containing all two-digit numbers are squeezed together on a square dartboard. The best prizes are awarded if the dart hits a balloon with a number having 9 as a digit. Two people have thrown a dart and both were winners. Those balloons *were not* replaced. What is the probability the next person is also a winner?