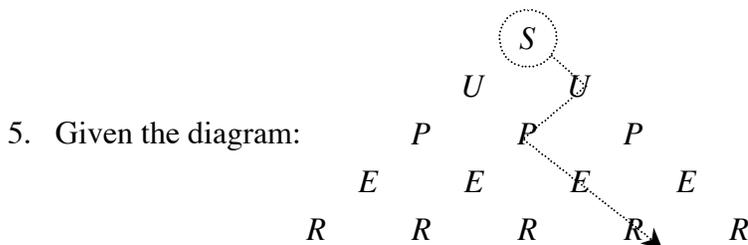


2006 Washington State Math Championship

Unless a particular problem directs otherwise, give an exact answer or one rounded to the nearest thousandth.

Probability & Statistics - Grade 6

1. Aaron has been keeping track of the length of slugs he finds along the trail. He has found 9 so far with an average length of 12.5cm. Then he found a monster slug large enough to raise the average to 13.75cm. How many times longer was this monster slug than the original average (12.5)? Answer as a decimal.
2. The average of 8 whole numbers is 8. If 7 of these numbers are 1 then the eighth must be what number?
3. When 5 fair coins are flipped, what is the probability that exactly two of them show tails? Answer in a reduced fraction.
4. Two dice are rolled and the smaller number is subtracted from the larger number. What is the probability that the difference of the two dice is a prime number? Answer in a reduced fraction.



How many different paths through the diagram spell “SUPER” by starting at the top and selecting letters as you move down.

6. A particle moves randomly along a number line in single unit jumps starting at zero, and is equally likely to move left or right for a move. What is the probability that it is back at zero after four moves? Answer as a reduced fraction.
7. Five boys and four girls go to a movie and sit in the same row. How many ways can they arrange themselves if no two girls or boys sit together?

8. A total of 100 beads (50 Black and 50 White) are placed in two identical boxes so that one box contains only one bead (a black one), and the other box has the other 99 beads. What is the probability of choosing a black bead from a randomly chosen box? Answer to the nearest percent.

9. Egor has a large number of relatives that he classifies according to the chart. What is the probability that random relative showing up that is "Good Aunt" OR "Not Ugly"? Answer as a reduced fraction.

	Aunts	Uncles
Good	6	7
Bad	12	8
Ugly	3	11

10. Students at a math contest were asked to try three new flavors of ice cream from the local ice cream parlor: Huckleberry, Chokeycherry and Apple Dumpling. Eight people sampled all three. Forty-five had huckleberry, 56 had chokeycherry and 63 had apple dumpling. Eighteen sampled both huckleberry and chokeycherry, 26 tasted apple dumpling and chokeycherry, and 20 had huckleberry and apple dumpling. How many people had only apple dumpling?