

2003 Washington State Math Championship

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

Probability - Grade 5

1. What is the probability that a randomly chosen phone number ends in 4, 5, or 6?
2. What is the probability that a randomly selected 2 digit number is divisible by 8? Answer as a common fraction.
3. There are 14 yellow marbles, 5 red marbles, and 21 blue marbles in a sock. If one marble is drawn out, what is the probability that it is not blue?
4. Find the mean of the weights of salmon caught in the salmon derby. The weights in pounds are: 9, 6, 24, 15, 15, $10\frac{1}{2}$, 18, 21, 18, $7\frac{1}{2}$, 12, $4\frac{1}{2}$
5. Find the median of the weights of salmon caught in the salmon derby. The weights in pounds are: 9, 6, 24, 15, 15, $10\frac{1}{2}$, 18, 21, 18, $7\frac{1}{2}$, 12, $4\frac{1}{2}$
6. The 5 digit number, $37x33$, is divisible by 3 where x represents the middle digit. What is the probability that $x = 5$?
7. What is the probability that a randomly selected 2 digit number is prime? Answer as a reduced fraction.
8. A drawer contains 18 socks, some black and some white. Two socks are randomly drawn from the drawer. The probability that both socks are black is $\frac{26}{51}$. How many socks in the drawer are white?
9. At gasoline pumps the number of gallons of gasoline delivered is measured to the nearest thousandth of a gallon. The pump shuts off automatically when the gas tank is full. For example, when Phil Uppe got gas last week, the pump shut off at 12.633 gallons. At a random fill-up the last 3 decimal places can be thought of as a random number generator. What is the difference in the probability that the last 3 decimal places are 724 and that they are 000?
10. Foot Draggers sold the following sizes of basketball shoes last month. Based on this data, what is the probability that the next customer who buys basketball shoes will buy a half-size? Answer to the nearest thousandth.

Size	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11
Number sold of each size	2	5	9	15	19	16	7	6	3