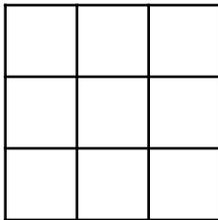


2002 Washington State Math Championship

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

Probability - Grade 5

1. Telli Datrute never lies. He has a deck of cards with an equal number of green, red, blue, and yellow cards. He draws out a card and tells you it's not green. What is the probability that it's not blue?
2. Blaine Reeder has 4 books that wants to put on a new bookshelf. How many orders (ABCD is one; DCBA is another.) are possible for arranging these 4 books?
3. In Timmy's drawer are T-shirts. Three are orange, 2 green, 4 white, 3 gray, and 6 blue. Lassie (who is color-blind) fetches one of his T-shirts. What is the probability it is orange?
4. How many different rectangles are there in the figure below? [Squares are rectangles.]



5. Each small square in the figure above has area 1. If rectangle is picked at random from all possible rectangles, what is the probability that it has a perimeter of 6?
6. If you roll two dice, what is the probability that the sum of the dice will be 8 or more?
7. At the Acme Credit Union the loan arranger made 4 loans in the amount of \$5000, one loan for \$1000, one loan for \$20,000, 3 loans for \$3000, and one loan for \$2000. What was the median amount of money loaned?
8. A new car license plate is proposed which will have an American flag followed by any combination of 4 letters and digits. How many such license plates are possible?
9. At the Acme Credit Union the loan arranger made 4 loans in the amount of \$5000, one loan for \$1000, one loan for \$20,000, 3 loans for \$3000, and one loan for \$2000. What was the mean amount of money loaned?
10. How many different numbers can be formed by multiplying two or more of the prime factors of 2002?