

6th Grade Junior Varsity

1. Find the **mean** and **median** and **mode** of the data set {11, 17, 19, 4, 2, 6, 11}
2. If a pair of jeans costs \$100.00, and tax is 8.25%, how much do you pay for the jeans?
3. Each time Pamela's cell phone rings, it rings for 3 seconds, then silent for 2 seconds. If Pamela's phone rings 5 times, how much time does it take from the beginning of the first ring until the end of the final ring?

6th Grade Varsity

1. Insert the symbols “+” and “-” into the equation below to make the equation true:

$$9 \ 2 \ 5 \ 1 \ 7 = 6$$

2. Ms. Yang, the director of camp Too Much Fun, has a rule that there needs to be two counselors for every 15 campers. Ms. Yang knows that there will be 195 campers for this upcoming summer. How many counselors will Ms. Yang need to hire?
3. Two squares with perimeter 4 cm are joined to form a rectangle whose length is 2 cm. What is the width of the rectangle?

7th Grade Junior Varsity

1. Jose is 5 feet, 4 inches tall. Milani is five feet, 6 inches tall. And Oscar is 6 feet two inches tall. Suppose that Jose stands on Oscar's head and that Milani stands on Jose's head. How many inches tall are all three put together?
2. If $x = 4$ and $y = 3$, then: $(x-y)^2 + 3x =$
3. Find the dimensions of a rectangle with area = 108 and perimeter = 42
4. If a pair of jeans costs \$120, and there is a sale of 10%, then tax of 8%, how much do you pay for the jeans?

7th Grade Varsity

1. Given a fair, six sided die, numbered 1 through 6, what is the probability of rolling a six, then a three?

2. How many ways can 5 students sit at a round table? (Assume that there are five chairs at the round table and that each person must sit in a chair by himself.)
3. Your cell phone plan costs \$39.95 a month for up to 600 minutes of local calls. Every minute of local calls over 600 minutes costs 6 cents a minute. Phone tax is 2% of the total bill, plus an additional \$5.00. You make 930 minutes of calls during the month. What is your bill?

8th Grade Junior Varsity

1. In a basketball tournament, the champion is to be determined from among 256 competitors by elimination. As soon as one of the competitors loses a match, she is out of the tournament. How many matches are needed in order to determine the winner?
2. What number is 6 times the sum of its digits?
3. The sum of 5 consecutive whole numbers is 90. What is the greatest of these whole numbers?
4. Bill opened a bookstore and sold 2 books the first day, six books the second day, 10 books the third day, 14 books the fourth, 18 the fifth, and so on. Business Boomed! The sales pattern continued. On what day did Bill sell 282 books?

8th Grade Varsity

1. On the way home from school, Tom found out that he got only half the allowance that Mark got. (Mark is not much older than Tom). Suzi is three years older and receives three times what Tom gets. Together, the three receive \$144. How much is each student actually getting?
2. Find all solutions to the equation: $x^2 + x - 20 = 0$
3. Dalia and Miguel are describing the same positive number. Dalia says “if the number is increased by 4, it is a perfect square less than 100.” Miguel adds “if 3 is subtracted from the number, the result is a prime number greater than 2.” What is the number that Dalia and Miguel are describing?