

NAME _____

Block _____

Workout 2

POTW #15

1. _____ The product of a set of consecutive integers is 720. If the mean is 3.5, what is the sum of the integers?
2. _____ % Mr. Adler and Mr. Bosch both work for the same company making \$40,000 and \$38,000 a year, respectively. The employer wishes to raise both their salaries for the next year so that they will be making the same amount of money as each other. The employer will use \$12,000 for the total of their raises. By what percent will Mr. Bosch's salary be raised?
Express your answer to the nearest tenth.
3. (, ,) On a quiz of 10 questions, every correct answer earns 5 points, but every wrong answer deducts 2 points. Questions left blank earn zero points. Tim got c questions correct, w questions wrong and left b questions blank. He earned a score of 31 on the quiz. What is the ordered triple (c, w, b) ?
4. _____ Three consecutive primes are summed. When the sum is squared, the result is 72,361. What is the largest of the three primes?
5. _____ cu meters The formula for the volume of a sphere is $V = (4/3)\pi r^3$, where r is the radius of the sphere. Alex places a particular sphere into a cubic box with sides of 10 meters. If the sphere is tangent to each of the box's faces, what is the volume of the sphere?
Express your answer as a decimal to the nearest tenth.
6. _____ minutes Anna ran to her friend's house at a rate of 8 miles per hour. On the way back she ran the same route in reverse, but she ran at a rate of 6 miles per hour. If Anna's route is one-mile long each way, how many minutes longer did it take her to run back from her friend's house than it took her to run to her friend's house? Express your answer as a decimal to the nearest tenth.
7. _____ units Twenty-nine is the shortest leg of a right triangle whose other leg and hypotenuse are consecutive whole numbers. What is the sum of the lengths of the other two sides?
8. _____ Of all the four-digit positive integers containing only digits from the set $\{2, 4, 6, 8\}$, what fraction of them have at least one of their digits repeated? Express your answer as a common fraction.
9. _____ Due to bowling a score of 204 in his last game, Remy raised his average from exactly 156 to exactly 158. What score must he bowl in the next game to raise his overall average to exactly 159?
10. _____ % The positive square root of 200 is what percent larger than the positive square root of 121? Express your answer to the nearest whole number.

