

Junior High 2007

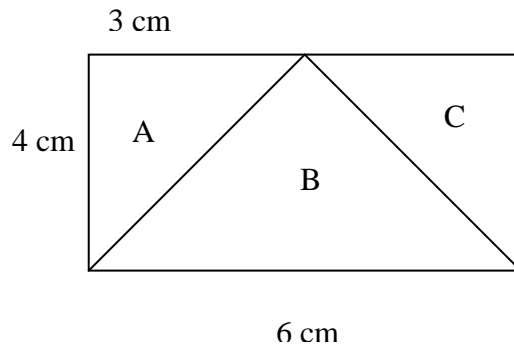
Ciphering Round 1

1. You purchase a coat for \$42 and a pair of gloves for \$12. The sales tax is 6.5%. If you give the cashier \$100, how much change will you get back?
2. Solve $2x + 5 = 19$ for x .
3. A local restaurant advertises that you can choose from 6 appetizers, 12 entrees and 2 desserts. How many possible meal combinations are there at this restaurant if you are to choose one of each?
4. The perimeter of a rectangle is 100 cm. If the length is 10 cm longer than the width, what is the area of the rectangle?
5. Last year's cost for a laptop computer was \$1800. This year the price has gone down to \$1250. What is the percent decrease (to the nearest percent) in the price of the laptop computer?
6. What is the surface area of a rectangular prism with a length of 12 inches, a width of 18 inches, and a height of 20 inches?
7. The mean of five tests is 92. Four of the test grades are 85, 88, 90, and 99. What is the median test grade?
8. What is the slope of a line that is perpendicular to the line $4x - 5y = 7$?

Junior High 2007

Ciphering Round 2

1. If Maureen went to the store and bought a chair for \$17.95, a lawn rake for \$13.59, a spade for \$14.86, a lawn mower for \$179.98, and two six packs of mineral water for \$2.43 each, how much was her bill?
2. What is the measure of each vertex angle of a regular decagon?
3. What is the y – intercept of $2x + 7y = 10$?
4. The average of three numbers is 7 and the average of two numbers is 6. What is the average of all five numbers?
5. A student working in a convenience store worked 13.5 hours in one week. The student's paycheck was \$94.50. What is the student's hourly wage?
6. What is the volume of a square pyramid where each side of the base is 6 cm and the height of the pyramid is 4 times the length of each side of the base?
7. What is the probability that a dart thrown to the figure below lands in region B?



8. Solve $|3x - 7| = 10$.

Junior High 2007

Ciphering Round 1 Answers

1. \$42.49 or 42.49
2. $x = 7$
3. 144
4. 600 or 600 square centimeters
5. 31% or 31
6. 1632 or 1632 square inches
7. 90
8. $-5/4$

Ciphering Round 2 Answers

1. \$231.24 or 231.24
2. 144 or 144 degrees
3. $10/7$ or $1\frac{3}{7}$
4. 6.6 or $6\frac{3}{5}$
5. \$7 or 7
6. 288 or 288 cubic centimeters
7. $\frac{1}{2}$ or .5 or 50%
8. $x = 17/3$ or $x = -1$ another acceptable answer is $x = 5\frac{2}{3}$ or $x = -1$