

Math Olympiad Beginner Homework 9

Name _____

1. Tracy's Trophies charges by the letter for engraving. There is one fee for each vowel and a different fee for each consonant. CAROL costs \$31 to engrave. GABRIEL costs \$43 to engrave. How many dollars does BRIDGET cost to engrave? [45]
2. Admission to the local movie theater is \$3 for each child and \$7 for each adult. A group of 12 people pay \$64 admission. How many children are in this group? [6]
3. One hat and two shirts cost \$21. Two hats and one shirt cost \$18. Megan has exactly enough money to buy one hat and one shirt. How much money does Megan have? [13]
4. A toll bridge charges \$4 for a car and \$6 for a truck. One day 200 of these vehicles crossed the bridge and paid a total of \$860 in tolls. How many of these vehicles were trucks? [30]
5. Rebekah's mother is 4 times as old as Rebekah is now. In 6 years, Rebekah's mother will be 3 times as old as Rebekah will be then. What is Rebekah's age now, in years? [12]
6. The counting numbers are written out as one long string:

123456789101112...

What is the 100th digit in the string? [5]

7. Aidan writes the counting numbers in order. In Row 1, he writes the first number. In Row 2 he writes the next two numbers, and so on as shown. What is the thirteenth number in Row 16? [133]

Row 1: 1
Row 2: 2 3
Row 3: 4 5 6
... and so on

8. In the sequence below, we add any two consecutive entries to get the very next entry. The last two entries are 37 and 60 in that order. The first entry is 4. How many entries are in this sequence in all? [7]

4 , ... , , 37 , 60 .

9. One loaf of bread and six rolls cost \$1.80. At the same prices, two loaves of bread and four rolls cost \$2.40. How much does one loaf of bread cost? [\$0.90]
10. The sum of the ages of three children is 32. The age of the oldest is twice the age of the youngest. The ages of the two older children differ by three years. What is the age of the youngest child? [7]