

Math Olympiad Beginner Homework 8

Name _____ Answer Key _____

1. Michael has some cards. If he puts them in 5 equal piles, there are 3 left over. If he puts them in 4 equal piles, there are 2 left over. If he puts them in 3 equal piles, there is 1 card left over. What is the fewest cards Michael may have? [Ans: 58]
2. 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? [Ans: 30]
3. Zach has 2 blue candies for every 1 red candy. After he eats 1 of the blues and 2 of the reds, Zach has 5 blue candies for every 2 red candies. How many candies does Zach start with? [Ans: 24]
4. A cubical box without a top is 5 cm on each edge. The box is filled with 125 identical 1-cm cubes that exactly fill the box. For how many 1-cm cubes does exactly one face touch the box? [Ans: 57]
5. The average of 6 consecutive odd numbers is 50. What is the least of these numbers? [Ans: 45]
6. Suppose it is now 4:00 PM. What time will it be in 245 hours? [Ans: 21]
7. Ashley's locker number is a three-digit multiple of 5. The tens digit is the sum of the hundreds digit and the ones digit. The sum of all three digits is 16. No digit is repeated. What is Ashley's locker number? [Ans: 385]
8. Ten friends have an average of 5 toy soldiers each. Lee joins them, and now the average is 6 toy soldiers each. How many toy soldiers does Lee have? [Ans: 16]
9. There are 2 red cars and 3 blue cars. The 5 cars contain a total of 12 people. No car has more than 4 people. Every car has at least 1 person. The only cars with the same number of people are the red cars. How many people are in **1 red car**? [Ans: 2]

10. Zach buys two hot dogs and three drinks for \$14. Drinks cost \$2 each. How much does one hot dog cost? [Ans: 4]
11. Michael has \$5 less than Samantha. Samantha has \$10 more than Rob. Rob has \$15 less than Hailey. How many more dollars does Hailey have than Michael? [Ans: 10]