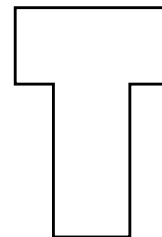


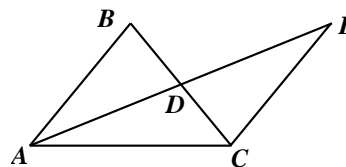
# MathTime

March 2, 2007

1. Mindy made three purchases for \$1.98, \$5.04 and \$9.89. What was her total, to the nearest dollar?
2. The letter T is formed by placing two 2 inch x 4 inch rectangles next to each other, as shown. What is the perimeter of the T, in inches?
3. Amanda gets 70% on a 10-problem test, 80% on a 20-problem test and 90% on a 30-problem test. If the three tests are combined into one 60-problem test, find the percentage of her overall score?



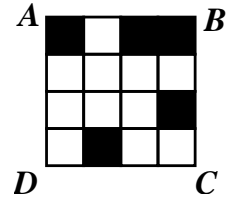
4. Triangle  $ABC$  is an isosceles triangle with  $AB = BC$ . Point  $D$  is the midpoint of both  $BC$  and  $AE$ , and  $CE$  is 12 units long. Triangle  $ABD$  is congruent to triangle  $ECD$ . What is the length of  $BD$ ?



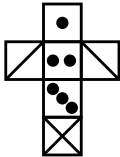
5. A box contains gold coins. If the coins are equally divided among six people, four coins are left over. If the coins are equally divided among five people, three coins are left over. If the box holds the smallest number of coins that meets these two conditions, how many coins are left when equally divided among seven people?
6. Big Al, the ape, ate 100 bananas from May 1 through May 5. Each day he ate six more bananas than during the previous day. How many bananas did Big Al eat on May 5?
7. Joe had walked half way from home to school when he realized he was late. He ran the rest of the way to school. He ran 3 times as fast as he walked. He took 6 minutes to walk half way to school. How many minutes did it take Joe to get from home to school?
8. Bill walks 12 miles south, then 34 miles east, and finally 12 miles south. How far is he from his starting point?

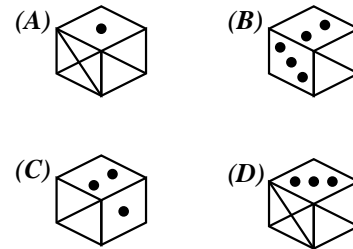
9. Soda is sold in packs of 6, 12 and 24 cans. What is the minimal number of packs needed to buy exactly 90 cans of soda?

10. What is the minimal number of small squares that must be colored black so the large square has diagonal  $BD$  as a line of symmetry?

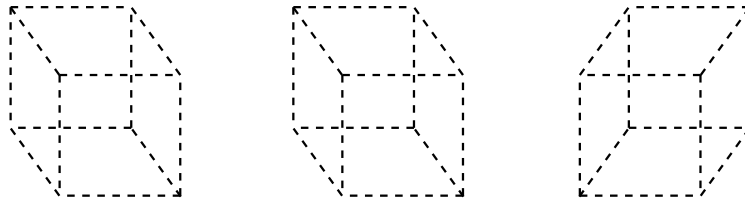
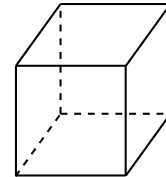


11. A group of children riding on bicycles and tricycles rode past Billy Bob's house. Billy Bob counted 7 children and 19 wheels. How many tricycles were there?

12.  From the cubes on the right choose those whose unfolding is on the left.



13. On the standard cube picture on the right you may see visible and invisible edges. This picture represents a view of the cube from top-right. The three picture below represent views from bottom-right, top-left, and bottom-left. Draw the visible edges on them.



14. In a number  $37*25$  replace  $*$  by a digit so that the obtained number would be divisible by 9. By 11. By 99.
15. Convert the numbers 7, 12, 16 from decimal system into binary.
16. Convert the numbers 100, 101, 1100 from binary system into decimal.