1. Present each number as a product of prime factors (prime factorization):

   a). 96   b). 72   c). 216   d). 100   e). 280   f). 365

2. In some remote village, many years ago villagers tamed dragons. They even started to breed them. Somehow on a weekend day or a holiday the villages had 2 eggs less hatching then on a week day. How many dragons have been hatched on a week day and on a weekend day if within one full week they added 80 dragons to their dragon flock?

   Write an appropriate equation to solve this problem!

3. Find the LCM (Least Common Multiple) and GCF (Greatest Common Divisor) of the following numbers …

a). 9 and 12   b).16 and 12   c). 24 and 8   d). 28 and 30

4. Two bells ring together at 10:45 A.M. One bell rings every 9 minutes and the other every 12 minutes. When will they next ring together?

5. A florist has 36 roses, 90 lilies, and 60 daisies. What is largest amount of bouquets he can create from these flowers evenly dividing each kind of flowers between them?

6. Compute by the most convenient way:

   a. $4 \cdot 23 =$

   b. $17 \cdot 15 =$

   c. $13 \cdot 18 =$

   d. $12 \cdot 87 + 35 \cdot 13 + 87 \cdot 23 =$

   e. $41 \cdot 80 - 25 \cdot 41 + 55 \cdot 29 =$

7. Two buses leave from the same bus station following two different routes. For the first one it takes 48 minutes to complete the roundtrip route. For the second one it takes 1 hour and 12 minutes to complete the round trip route. How much time will it take for the buses to meet at the bus station for the first time after the have departed for their routes at the same time?

8. Mary has a rectangular backyard with sides of 48 and 40 yards. She wants to create square flower beds and plant different kind of flowers in each flower bed. What is the largest possible size of one square flower bed if she makes all squares equal?

9. Plot points on the plane of coordinates:
A(−1, 8), B(6,1), C(6,6), and D(−6,−2) to find coordinates of point F that marks the intersection of AB and CD.