Greatest Common Factor (GCF) and Least Common Multiple (LCM) word problems

Grade 5 Math Word Problems Worksheet

1. At the gym, Hillary swims every 6 days, runs every 4 days, and cycles every 16 days. If she did all three activities today, in how many days will she do all three activities again on the same day?

2. Oscar needs to ship 14 rock CDs, 12 classical CDs, and 8 pop CDs. He can pack only one type of CD in each box, and he must pack the same number of CDs in each box. What is the greatest number of CDs Oscar can pack in each box?

3. I want to plant 45 sunflower plants, 81 corn plants and 63 tomato plants in my garden. If I put the same number of plants in each row and each row has only one type of plant, what is the greatest number of plants I can put in one row?
4. Cups are sold 6 to a package and plates are sold 8 to a package. If you want to have the same number of each item for a party, what is the least number of packages of each you need to buy?

5. A full moon occurs every 30 days. If the last full moon occurred on a Friday, how many days will pass before a full moon occurs again on a Friday?
Answers

1. Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52.
   6: 6, 12, 18, 24, 30, 36, 42, 48, 54.
   16: 16, 32, 48

   In 48 days, she will do all three on the same day.

2. Factors of 14: 1, 2, 7, 14
   12: 1, 2, 3, 4, 6, 12
   8: 1, 2, 4, 8

   He can pack 2 CDs in each box.

3. Factors of 45: 1, 3, 5, 9, 15, 45
   81: 1, 3, 9, 27, 81
   63: 1, 3, 7, 9, 21, 63

   I can put 9 in each row.

4. Multiples of 6: 6, 12, 18, 24, 30, 36, 42, 48, 54.
   8: 8, 16, 24, 32, 40, 48, 56, 64, 72

   He needs to buy at least 24 of each, so 4 packages cups and 3 packages of plates.

5. To find a common multiple, we can multiply 30 days by 7 days in a Week (to end up on Friday again). 30 x 7 = 210

   It will take 210 days.