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

Grade 5 Math Word Problems Worksheet

1.   Magellan has decided to make party baskets for the fund raiser. Balloons are sold in bags of 20, party horns are sold in bags of 10, and there are 8 candy bars in a package. How many of each should he buy so there are an equal number of balloons, horns, and candy bars in each basket?

2.   A radio station is having a promotion in which every 12th caller receives a free concert ticket, and every 15th caller receives a limo ride. Which caller will be the first one to win both?

3.   Cups are sold 5 to a package and plates are sold 10 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?

4. Tony needs to ship 12 comedy DVDs, 24 animated DVDs, and 30 musical DVDs. He can pack only one type of DVD in each box, and he must pack the same number of DVDs in each box. What is the greatest number of DVDs Tony can pack in each box?

5. Mei has 15 oranges, 9 peaches and 18 pears. She wants to put all of the fruit into baskets with each basket having the same number of pieces of fruit in it. Without mixing the fruit, what is the greatest number of pieces of fruit Mei can put in each basket?

Answers

1. Multiples of 8: 8, 16, 24, 32, **40**, 48
    20: 20, **40**, 60
    10: 10, 20, 30, **40**, 50
    In order to have 40 of each item, Magellan should buy 5 packages of candy bars, 4 bags of horns and 2 bags of balloons.

2. Multiples of 12: 12, 24, 36, 48, **60**, 72
    15: 15, 30, 45, **60**, 75
    The 60th caller will win both.

3. Multiples of 5: 5, **10**, 15, 20, 25
    10: **10**, 20, 30
    You should buy 10 of each. So, you need 2 packages of cups
    (5 x 2 = 10) and 1 of plates (10 x 1 = 10).
    You should buy 2 packages of cups and 1 package of plates.

4. Factors of 12: 1, 2, 3, 4, **6**, 12
    24: 1, 2, 3, 4, **6**, 8, 12, 24
    30: 1, 2, 3, 5, **6**, 10, 15, 30
    He can pack 6 DVDs in each box.

5. Factors of 15: 1, **3**, 5, 15
    9: 1, **3**, 9
    18: 1, 2, **3**, 6, 9, 18
    She can pack 3 pieces of fruit in each basket.