GCF and LCM Application

1. Bryan is making balloon arrangements. He has 8 blue and 12 green balloons. What is the greatest amount of arrangements he can make if he wants them to be identical?

2. Ernesto has painting class every 2 weeks. Kamala has a pottery class every 5 weeks. Ernesto and Kamala met at the art building for class this week. How many weeks will it be until they see each other again?

3. Lana earned $49 of Friday, $42 on Saturday, and $21 on Sunday selling bracelets. She sold each bracelet for the same amount of money. What is the most she could charge for each bracelet?

4. The Movie House gives away a $5 coupon for every 4 movies purchased. They give away a bag of popcorn for every 3 movies purchased. How many movies would you have to purchase in all before you received both a $5 coupon and a bag of popcorn at the same purchase?

On Your Own:

5. Fourteen boys and 21 girls will be equally divided into groups. Find the greatest number of groups that can be created if no one is left out.

6. A gardener has 27 pansies and 36 daisies. He plants an equal number of each type of flower in each row. What is the greatest possible number of pansies in each row.
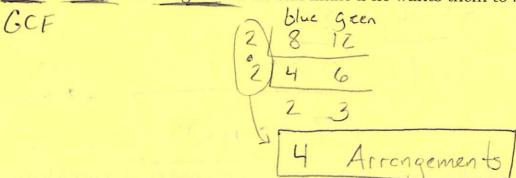
7. The science department buys the equipment shown in the table. They bought all three items this year. In how many years will they have to buy all three items again?

Item	Time Bought
Microscopes	every 5 years
Safety goggles	every 4 years
Test tubes	every 2 years

8. A grocery store has 16 oranges, 20 apples, and 24 pears. The clerk needs to put an equal number of apples, oranges, and pears into each basket. What is the greatest number of baskets that can be made so that no fruit is left?
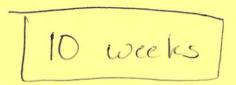
GCF and LCM Application

1. Bryan is making balloon arrangements. He has 8 blue and 12 green balloons. What is the greatest amount of arrangements he can make if he wants them to be identical?

GCF

```
        blue  green
   2 |  8    12
   2 |  4     6
        2     3
```
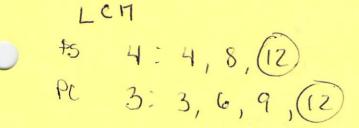
4   Arrangements

2. Ernesto has painting class every 2 weeks. Kamala has a pottery class every 5 weeks. Ernesto and Kamala met at the art building for class this week. How many weeks will it be until they see each other again?
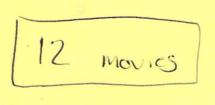
LCM

Paint   2: 2, 4, 6, 8, (10)

Pottery 5: 5, (10)

10 weeks

3. Lana earned $49 of Friday, $42 on Saturday, and $21 on Sunday selling bracelets. She sold each bracelet for the same amount of money. What is the most she could charge for each bracelet?

GCF

```
        Fri.   Sat   Sun.
    7 |  49    42    21
         7      6     3
```
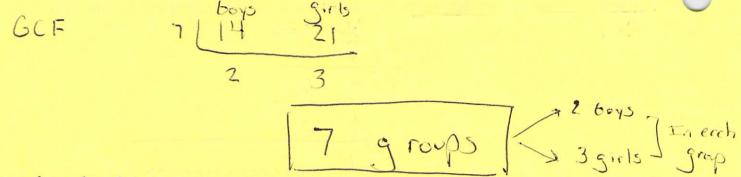
$7

4. The Movie House gives away a $5 coupon for every 4 movies purchased. They give away a bag of popcorn for every 3 movies purchased. How many movies would you have to purchase in all before you received both a $5 coupon and a bag of popcorn at the same purchase?
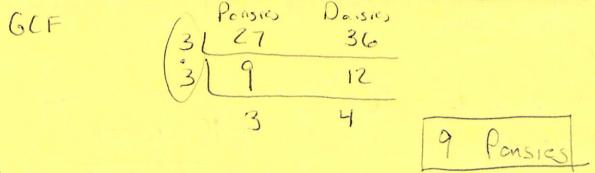
LCM

$5   4: 4, 8, (12)

PC   3: 3, 6, 9, (12)

12 movies

On Your Own:

5. Fourteen boys and 21 girls will be equally divided into groups. Find the greatest number of groups that can be created if no one is left out.

GCF

boys   girls

$7 \lfloor$ 14   21

2   3

7 groups → 2 boys, 3 girls — in each group

6. A gardener has 27 pansies and 36 daisies. He plants an equal number of each type of flower in each row. What is the greatest possible number of pansies in each row.

GCF

Pansies   Daisies

$3 \lfloor$ 27   36

$3 \lfloor$ 9   12

3   4

9 Pansies

7. The science department buys the equipment shown in the table. They bought all three items this year. In how many years will they have to buy all three items again?

LCM

M   5: 5, 10, 15, (20)

SG   4: 4, 8, 12, 16, (20)

TT   2: 2, 4, 6, 8, 10, 12, 14, 16, 18, (20)

20 years

Item	Time Bought
Microscopes	every 5 years
Safety goggles	every 4 years
Test tubes	every 2 years

8. A grocery store has 16 oranges, 20 apples, and 24 pears. The clerk needs to put an equal number of apples, oranges, and pears into each basket. What is the greatest number of baskets that can be made so that no fruit is left?

GCF

O   A   P

$2 \lfloor$ 16   20   24

$2 \lfloor$ 8   10   12

4   5   6

4 baskets