Word problems on GCD and LCM

1. Boxes that are 12 inches tall are being stacked next to boxes that are 18 inches tall. What is the shortest height at which the two stacks will be the same height?

2. Sam can jump 4 steps at a time and Nina can jump 5 steps at a time. On which of the steps will both meet if both start jumping together?

3. The table below shows the number of students in the school choir.

School Choir

Students	Number
Girls	48
Boys	64

The choir teacher plans to arrange the students in equal rows. Only girls or boys will be in each row. What is the greatest number of students that could be in each row?

4. Pencils come in packages of 10. Erasers come in packages of 12. Phillip wants to purchase the smallest number of pencils and erasers so that he will have exactly 1 eraser per pencil. How many packages of pencils and erasers should Phillip buy?

A. 4 packages of pencils and 3 packages of erasers
B. 5 packages of pencils and 4 packages of erasers
C. 6 packages of pencils and 5 packages of erasers
D. 12 packages of pencils and 10 packages of erasers

5. Find the least length of a rope which can be cut into whole number of pieces of lengths 45 cm, 75 cm and 81 cm.

6. Bridget has swimming lessons every fifth day and diving lessons every third day. If she had a swimming lesson and a diving lesson on May 5, when will be the next date on which she has both swimming and diving lessons?

7. Two neon lights are turned on at the same time. One blinks every 4 seconds and the other blinks every 6 seconds. In 60 seconds, how many times will they blink at the same time?

8. 210 oranges, 252 apples and 294 pears are equally packed in cartons so that no fruit is left. What is the biggest possible number of cartons needed?

Answers

1. 36 inches. (LCM = 36)
2. 20
3. GCF is 16
4. C (LCM is 60)
5. 2025 cm
6. May 20th. (LCM = 15)
7. In 60 seconds
8. 42