Worksheet 1 : 21st June : Multiples, Common Multiples, LCM

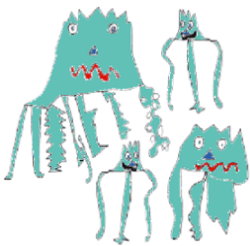1. **Flashing Lights**

a) Norrie sees two lights flash at the same time, then one of them flashes every 4th second, and the other flashes every 5th second. How many times do they flash together during a whole minute?

b) Norrie then watched a third light. She saw it flash at the same time as the other two, then flash every 6th second. How many minutes later will this light again flashes at exactly the same time as the other two?

2. **Spiders and flies :** A spider has 8 legs and flies has 6 legs. There were 22 legs creeping across the web. How many flies? How many spiders?
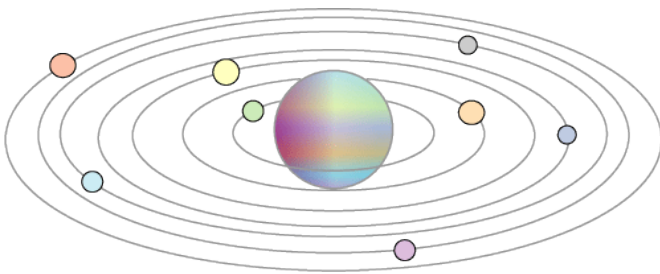
3. **Zios and Zepts**

On the planet Vuv there are two types of creatures. The Zios have 5 legs and the Zepts have 7 legs. The great planetary explorer Nico counted 52 legs. How many Zios and how many Zepts were there ?

4. **The Moons of Vuv**

The planet of Vuv has 4 moons which rotate around it as shown. These moons all have long and confusing names so scientists usually call them by their initials: A,B,C and D starting from the nearest one to the planet.

Once in a while all four moons line up with the planet and this is called a 'super-eclipse'

Moon A completes a cycle round the planet in one year, moon B takes two years, moon C takes three years, moon D takes four years and so on.

How long is it between each 'super-eclipse' on the planet of Vuv?

b) If Vuv had 7 moons, how long would it be between each super-eclipse ?

c) If Vuv had 5 moons, how many times will the super eclipse occur in 90 years?

5. I wrote down a 4-digit number that was divisible by 3, 4, 5 and 6, but I spilt a cup of hot chocolate on it and can only see the first two digits.

The first two digits are 95 (in that order). What were the last two?

6. Packing Chocolates : Dairy Milk' chocolate bars are packed either in boxes of 5 or boxes of 7. What is the smallest number of full boxes required to pack exactly 69 'Dairy Milk' bars?

7. Write the first 15 multiples of 9.

8. Write the multiples of 7 between 50 and 100

9. List the multiples of 12 upto 200.

10. List the multiples of 13 between 150 and 200.

11. List 5 common multiples of 6 and 8.

12. List the common multiples of 6 and 9 that lie between 60 and 110.

13. Meeting your friend : Rohit and Om live in the same colony. Rohit and Om just went to their home. Rohit comes out every after every 3 hours, and Om comes out every 4 hours. When will they meet the next time?

14. Music and beats: A music band has a clap sound and a loud drum sound among other tones. A clap happens after every 6 beats and a loud drum after every 8 beats.

a) After how many beats will they both sound together?

b) How many times will they sound together during 100 beats?

15. List the common multiples of 8 and 12 upto 250.

16. A class is divided into 5 groups of 6 students. Show it in the form of mathematics.

17. A tap takes 3 hours to fill a bucket. How long will it take to fill 14 buckets?

18. If a box can hold 8 chocolates, can you fill 246 chocolates in the boxes so that no box is partially empty? (There are lot of boxes).

19. Packing chocolates : 'Kitkat' chocolate bars are packed either in boxes of 3 or 5. What is the smallest number of full boxes required to pack exactly 46 Kitkat Chocolates?

20. A number is a multiple of 3,4,5 and 6. Can you find the smallest such number?

21. Legs of Spiders: A spider has 8 legs. In a room, there are many spiders. What is the total possible number of legs in the room out of the following : 15,16,18,20,53,64,120?

22. Where are the moons? Jupiter has 4 moons. They move in 4 different circles around Jupiter. One day, only one moon was visible from Jupiter. How is it possible? Draw a picture to show it.

23. On a Saturday, Tausif reaches his home at 1pm. She goes outside to look for his friends after every 2 hours. What are the times at which he goes out?

24. Is 75 a multiple of 9? Is 351 a multiple of 9 ?

25. Is 56 a multiple of 7? Is 56 a multiple of 4 ? Is 56 a multiple of 3 ?