

◆ Q1. Mouse and Cat Game**Situation:**

- Kunjan (the mouse) starts at **14th step**, jumps **2 steps at a time**.
- Cat starts at **3rd step**, jumps **3 steps at a time**.
- Hole is at **28th step**.

✓ Answer:**(a) Steps the mouse will be on:**

Starts at 14, jumps by 2 →
14, 16, 18, 20, 22, 24, 26, 28

(b) Steps the cat will be on:

Starts at 3, jumps by 3 →
3, 6, 9, 12, 15, 18, 21, 24, 27

(c) Common steps:

- Mouse: 18, 24
 - Cat: 18, 24
- ✓ So, they meet at step 18 and 24.**

(d) Can the mouse get away?

- Mouse reaches **28**, but cat may catch at **18 or 24**.
- ✓ So, the mouse may NOT get away safely.**

◆ Q2. New case: Cat on 5th step (jumps 5), Mouse on 8th (jumps 4)

- Mouse steps: 8, 12, 16, 20, 24, 28
- Cat steps: 5, 10, 15, 20, 25

✓ They both meet at 20**✗ Mouse cannot get away again****◆ Q3. Colouring the Table Game****Instructions:**

- Mark all **multiples of 2** with red dots.
- Mark all **multiples of 3** with yellow dots.
- Mark all **multiples of 4** with blue dots.

✓ Find boxes that have all 3 dots (common multiples of 2, 3, and 4):

- LCM of 2, 3, 4 = **12**
- So: **12, 24, 36, 48, 60...**

✓ Letters on top of these boxes:

(Using a grid with letters above columns)
 Example: Box 12 = Letter I, 24 = R, 36 = U...

→ Final answer: Write the letters on top of the boxes like 12, 24, 36...

◆ Q4. Factor Chart Activity

(a) Fill in the factors of 12:

- $12 = 1 \times 12, 2 \times 6, 3 \times 4$
✓ Factors: **1, 2, 3, 4, 6, 12**

(b) Factor of 10:

- $1 \times 10, 2 \times 5$
✓ Factors: **1, 2, 5, 10**

(c) Factor of 36:

- $1 \times 36, 2 \times 18, 3 \times 12, 4 \times 9, 6 \times 6$
✓ Factors: **1, 2, 3, 4, 6, 9, 12, 18, 36**
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◆ Q5. Common Factor Circle

(a) 25 and 35

- 25: 1, 5, 25
- 35: 1, 5, 7, 35
✓ **Common factors:** 1, 5

(b) 40 and 60

- 40: 1, 2, 4, 5, 8, 10, 20, 40
 - 60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
✓ **Common factors:** 1, 2, 4, 5, 10, 20
✓ **Biggest common factor:** 20
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◆ Q6. Factor Tree for 24

✓ Factor Tree 1:

24
/
4 6
/
2 2 2 3

✓ Factor Tree 2:

24
/
3 8
/
2 4
/
2 2

✔ Factor Tree 3:

24

/ \

12 2

/ \

4 3

/ \

2 2

◆ Q7. Tiling Problem: Tile sizes = 2 ft, 3 ft, 5 ft

✔ Find the LCM of 2, 3, 5:

- $\text{LCM}(2, 3, 5) = 30$

📌 Shortest length of path = 30 ft

◆ Q8. Manoj's Room is 9 ft × 12 ft

Tiles available:

- 1×1, 2×2, 3×3

✔ Which tile fits exactly (no cutting)?

Check:

- 3 ft tiles:
 - $9 \div 3 = 3$ (OK)
 - $12 \div 3 = 4$ (OK)
 - ✔ So, 3×3 tile fits perfectly

◆ Q9. Rani, Geetha, Naseema want to tile 90-ft path

- They use 3 different tile sizes, no cutting
- Must divide 90 exactly

✔ Answers:

- Rani: 2 ft ($90 \div 2 = 45$ tiles)
- Geetha: 3 ft ($90 \div 3 = 30$ tiles)
- Naseema: 5 ft ($90 \div 5 = 18$ tiles)

📌 All tile sizes divide 90 exactly ✔