📘 Chapter 3: How Many Squares? – Detailed Q&A

🔶 Q1. Make as many rectangles as possible using 12 equal squares.

✅ **Answer:**

You can make the following rectangles:

Length × Breadth	Area	Perimeter
1 × 12	12	2×(1+12) = 26 cm
2 × 6	12	2×(2+6) = 16 cm
3 × 4	12	2×(3+4) = 14 cm
4 × 3	12	same as 3 × 4
6 × 2	12	same as 2 × 6
12 × 1	12	same as 1 × 12

- **Number of rectangles:** 3 (unique by dimension)
- **Longest perimeter: 1 × 12** → 26 cm
- **Shortest perimeter: 3 × 4** → 14 cm

🔶 Q2. Which rectangle has the longest perimeter? Which one the smallest?

✅ **Answer:**

- **Longest Perimeter:** 1 × 12 → 26 cm
- **Smallest Perimeter:** 3 × 4 → 14 cm

📝 **Concept:** Perimeter = 2 × (length + breadth)

🔶 Q3. Stamp Area Estimation

(Refer to page with stamps A, B, C, D, E, F on grid)

✅ **Answer:**

Assume each square = 1 cm²:

Stamp	Area (counted squares)
A	~6 cm²
B	~9 cm²
C	~6 cm²
D	12 cm²
E	~9 cm²
F	~4 cm²

- **Biggest Area:** Stamp D (12 cm²)
- **Same Area:** Stamps B and E (9 cm²)

- **Smallest Area:** Stamp F (4 cm²)
- **Difference (biggest - smallest):** 12 − 4 = **8 cm²**

🔶 **Q4. Area Guessing Game**

1. **Which is bigger — your footprint or the page of this book?**
    - Likely the **page of the book**.
2. **Which has smaller area — two ₹5 notes or one ₹100 note?**
    - ₹100 note is longer but may have similar area. Use estimation or actual measurement.
3. **Compare blue and yellow shapes (given):**
    - Count and compare number of squares filled.

📝 **Tip:** Count full and half squares for accuracy.

🔶 **Q5. Whose Hand or Footprint is Bigger?**

✅ **Answer:**

- Trace hand/foot on square grid.
- Count total squares inside the traced area.
- Compare with a friend's.

📌 This helps in visualizing area without formulas.

🔶 **Q6. Animal Footprint Area Guess**

✅ **Example:**

- Hen: small area (~6–8 cm²)
- Dog: medium area (~12–15 cm²)
- Tiger: large area (~20+ cm²)

Encourage estimation based on shape and size.

🔶 **Q7. Triangle Area Estimation**

1. A triangle is half of a rectangle with area 2 cm².
    - Area = 1 cm²
2. Triangle inside 20 cm² rectangle:
    - Triangle = ½ × rectangle = **10 cm²**

📝 For irregular triangles, divide into known shapes (triangles, rectangles), find area, and add.