1. Which formula gives the area of a rectangle with length land breadth b?
   A. l×b
   B. 2(l+b)
   C. l+b
   D. l^2+b^2 (A)

Explanation : The area of a rectangle is obtained by multiplying its length by its breadth.

2. A rectangle is 8 cm long and 3 cm wide. What is its area?
   A. 24 cm^2
   B. 48 cm^2
   C. 22 cm^2
   D. 11 cm^2 (A)

Explanation: Area =8×3=24 cm^2.

3. A rectangle is 7 cm long and 4 cm wide. A diagonal divides it into two triangles. What is the area of each triangle?
   A. 28 cm^2
   B. 14 cm^2
   C. 11 cm^2
   D. 7 cm^2 (B)

Explanation: Rectangle area =7×4=28 cm"2. Each triangle has half the area, so 28÷2=14 cm^2.

4. Which rectangle requires more rangoli powder when both are coloured evenly: 8 cm × 3 cm or 7 cm × 4 cm?
   A. Both require the same amount
   B. The 8 cm × 3 cm rectangle
   C. The 7 cm × 4 cm rectangle
   D. It cannot be determined (C)

Explanation: Their areas are 24 cm^2 and 28 cm^2. The rectangle with the larger area requires more powder.

5. A square has side 6 cm. What is its area?
   A. 12 cm^2 B. 18 cm^2
   C. 36 cm^2 D. 24 cm^2 (C)

Explanation : Area of a square =6×6=36 cm^2.

6. If a square is divided into four equal-area parts, what fraction of the square is each part?
   A. $\frac{1}{2}$ B. $\frac{1}{3}$
   C. $\frac{1}{8}$ D. $\frac{1}{4}$ (D)

Explanation : Four equal parts divide the whole area equally, so each is one-fourth.

7. A rectangle has length 12 cm and breadth 5 cm. Its diagonal divides it into two triangles. What is the area of each triangle?
   A. 60 cm^2 B. 30 cm^2
   C. 17 cm^2 D. 15 cm^2 (B)

Explanation : Rectangle area =12×5=60 cm^2. Each triangle has area 60÷2=30 cm^2.

8. A rectangle contains 48 unit squares. How many unit squares of area does each triangle formed by a diagonal contain?
   A. 96 B. 12
   C. 48 D. 24 (D)

Explanation : A diagonal divides a rectangle into two equal-area triangles, so 48÷2=24.

9. Which statement about a diagonal of a rectangle is correct?
   A. It divides the rectangle into two triangles of equal area
   B. It divides the rectangle into four equal squares
   C. It always forms two equilateral triangles
   D. It doubles the rectangle's area (A)

Explanation : The two triangles together form the rectangle and have equal areas.

10. A square of side 10 cm is divided into four equal-area regions. What is the area of each region?
    A. 20 cm^2 B. 25 cm^2
    C. 50 cm^2 D. 40 cm^2 (B)

Explanation : Square area =10^2=100 cm^2. Each region has area 100÷4=25 cm^2.