

CBSE Class 5 — Mathematics**Fractions Case Study Worksheet — Case Study 1****Name:****Class: 5****Section:** _____**Case Study**

Riya's mother baked a large chocolate cake for her birthday party and cut it into 12 equal slices. 5 of the slices were eaten by the family before the guests arrived. During the party, 4 more slices were eaten by the guests. Riya wants to know how much cake is left and how to share it fairly with her 3 friends who arrive late.

Answer the following questions based on the case study above:

1. What fraction of the cake was eaten by the family before the party? [1 Mark]
2. What fraction of the cake was eaten in total (family + guests)? [1 Mark]
3. What fraction of the cake is left for Riya and her friends? [1 Mark]
4. If the remaining cake is shared equally among Riya and her 3 friends (4 people), what fraction of the whole cake does each person get? [1 Mark]
5. Express the fraction of cake eaten in total, in its simplest form. [1 Mark]

Answer Key — Case Study 1 (Fractions)

1. $5/12$ of the cake
2. $5/12 + 4/12 = 9/12$ of the cake
3. $12/12 - 9/12 = 3/12$ of the cake ($= 1/4$)
4. $3/12 \div 4 = 3/48 = 1/16$ of the whole cake per person
5. $9/12 = 3/4$

CBSE Class 5 — Mathematics**Fractions Case Study Worksheet — Case Study 2****Name:****Class: 5****Section:** _____**Case Study**

A school is organising a sports day. Out of 40 students in Class 5, $\frac{1}{4}$ of the students signed up for the running race, $\frac{2}{5}$ of the students signed up for badminton, and the rest signed up for chess. The sports teacher needs to prepare equipment and refreshments based on how many students join each activity.

Answer the following questions based on the case study above:

1. How many students signed up for the running race? [1 Mark]
2. How many students signed up for badminton? [1 Mark]
3. What fraction of the total students signed up for chess? [1 Mark]
4. How many students signed up for chess? [1 Mark]
5. What fraction of the class did NOT sign up for badminton? [1 Mark]

Answer Key — Case Study 2 (Fractions)

1. $\frac{1}{4}$ of 40 = 10 students
2. $\frac{2}{5}$ of 40 = 16 students
3. $1 - (\frac{1}{4} + \frac{2}{5}) = 1 - (\frac{5}{20} + \frac{8}{20}) = \frac{7}{20}$ of the students
4. $\frac{7}{20}$ of 40 = 14 students
5. $1 - \frac{2}{5} = \frac{3}{5}$ of the class