Grade 8 Case Study Questions with MCQs

1. Rational Numbers - Case Study

Case Study:

Ravi was helping his father distribute fertilizers evenly across four parts of their field. Each part required a different quantity:

- Part A: 3/4 kg
- Part B: 5/6 kg
- Part C: 7/8 kg
- Part D: 2/3 kg

He needed to calculate the total quantity of fertilizer required.

MCQs:

Q1. What is the total quantity of fertilizer Ravi needs?

A) 53/24 kg B) 50/24 kg C) 45/24 kg D) 60/24 kg

Answer: A

Q2. Which part required the least amount of fertilizer?

A) Part A B) Part B C) Part C D) Part D

Answer: D

Q3. Which two parts combined require more than 1.5 kg of fertilizer?

A) A and B B) B and C C) C and D D) A and D

Answer: B

2. Exponents and Powers - Case Study

Grade 8 Case Study Questions with MCQs

Case Study:

An electricity company produces 2^6 units of power in one hour. Over a day (24 hours), it produces power continuously. The company wants to express total power produced in exponential form.

MCQs:

Q1. How many units of power are produced in one day?

A) 2^6 × 24 B) 2^30 C) 24^2 D) 2^6 + 24

Answer: A

Q2. What is the value of 2^6?

A) 64 B) 32 C) 128 D) 256

Answer: A

Q3. If the company increases power output to 3^4 units/hour, how much will it produce in 2 hours?

A) 6^8 B) 3^8 C) 3^4 × 2 D) 3^4 + 3^4

Answer: C

3. Linear Graph - Case Study

Case Study:

A taxi driver charges Rs.50 as a base fare and Rs.10 for every kilometer traveled. Riya went on a trip and noted down the total fares for different distances. She then plotted a linear graph.

MCQs:

Q1. What is the equation representing the total fare (F) in terms of kilometers (k)?

Grade 8 Case Study Questions with MCQs

A) F = 50k + 10 B) F = 10k + 50 C) F = 60k D) F = k + 50

Answer: B

Q2. What will be the fare for a 7 km trip?

A) Rs.120 B) Rs.100 C) Rs.70 D) Rs.110

Answer: D

Q3. If the fare was Rs.90, how many kilometers did Riya travel?

A) 3 B) 4 C) 5 D) 6

Answer: D

4. Probability - Case Study

Case Study:

A box contains 5 red, 3 blue, and 2 green marbles. Meena picks one marble at random without looking.

MCQs:

Q1. What is the probability of picking a red marble?

A) 5/10 B) 1/2 C) 5/8 D) 5/10

Answer: D

Q2. What is the total number of marbles?

A) 9 B) 10 C) 11 D) 12

Answer: C

Grade 8 Case Study Questions with MCQs

Q3. What is the probability of picking a blue or green marble?

A) 4/11 B) 5/11 C) 3/11 D) 2/11

Answer: B