RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2: RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 provides detailed explanations and step-by-step solutions for problems related to compound interest. This exercise focuses on applying the compound interest formula to various scenarios, helping students understand how to calculate compound interest for different time periods and compounding frequencies.

By working through the problems students will gain a deeper understanding of how compound interest accumulates over time, including the effects of different compounding intervals on the final amount. The detailed solutions guide students through the process of solving compound interest problems, enhancing their problem-solving skills and preparing them effectively for exams.

RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 Overview

RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 provide an in-depth overview of problems related to compound interest. This exercise is designed to help students master the concept of compound interest through practical application. It includes a variety of problems that require students to use the compound interest formula to determine the amount accumulated over time, considering different interest rates and compounding periods.

By working through these exercises students can better understand how compound interest grows exponentially compared to simple interest. The solutions provided explain each step clearly, ensuring that students grasp the principles of compound interest and can apply them confidently in different scenarios.

RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 PDF

RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 PDF provides a detailed guide to solving compound interest problems. By referring to this PDF, students can gain clarity on how to calculate compound interest, manage different interest rates, and handle various compounding periods. Access the PDF through the link below to enhance your understanding and practice of compound interest calculations.

RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 PDF

RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 (Ex 11B)

RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2 are available below. This resource provide detailed solutions and explanations for problems related to operations on compound interest.

By using the formula, find the amount and compound interest on:

(1) Rs 6000 for 2 years at 9% per annum compounded annually.

Principal (P) =6000
Rate of the interest (R) = 9%
Time of the interest (N) = 2 years

Amount = P(1+R/100)*n
Amount = 6000 (1+9/100)*2
Amount = 6000 (1.09)*2
Amount = 6000 (1.09×1.09)
Amount = 6000× 1.1881
Amount = Rupees 7128.60

Compounded Interest = Amount - Principal

C.I = 7128.6- 6000.0
C.I = 1128.6

(2) Rs 10000 for 2 years at 11% per annum compounded annually.

Given,
Principal=Rs. 10000
Rate =11%
Time =2 years

Compound=P(1+r100)2

=10000(1+11100)2

=10000×(111)210000

=12321

Amount=12321−10000=2321.

(3) Rs 31250 for 3 years at 8% per annum compounded annually.

Given,
Principal=Rs. 31250
Rate r=8%
Time =3 years
Amount=p(1+r100)t
=31250(1+8100)3
=31250×(108100)3
=39,366Rs

compound=amount−principal
=39,366−31250
=Rs. 8116.

(4) Rs 10240 for 3 years at 12(1/2)% per annum compounded annually.

Given p=Rs. 10240

r=1212%⇒252%

Time=3 years

Amount=p(1+r100)t=10240(1+25/2100)3

=10240(1+18)3

=10240×(98)3

=14,580

Amount=14,580

(5) Rs 62500 for 2 years 6 months at 12% per annum compounded annually.

Solution

Principal (P)=Rs. 62500Rate (R)= 12% p.a.Period (n) = 2 years 6 months= 212 years

Here for first 2 years, we apply the compound interest formula and next 6 months, we apply simple interest formula.

The amount for 2 years is

∴ Amount $(A) = P\left(1+\dfrac{R}{100}\right)^n =$ Rs. $62500\left(1+\dfrac{12}{100}\right)^2 =$ Rs. $62500\times\left(\dfrac{28}{25}\right)^2\times\dfrac{53}{50} =$ Rs.

$62500\times\dfrac{28}{25}\times\dfrac{28}{25}\times\dfrac{100\times78}{4} =$ Rs. 78400

The amount for next 6 months: $78400\times\left(1+\dfrac{12\times1}{100\times2}\right)$
$=78400\times\dfrac{53}{50}$
$=83104$
Therefore, amount after $2\frac{1}{2}$ years is Rs. 83104

∴ C.I = A- P=Rs. 83104−Rs. 62500=Rs. 20604

(6) Rs 9000 for 2 years 4 months at 10% per annum compounded annually.

Solution

Given: Principal (P)=Rs. 9000

Rate (R)=10% per annum

Time (n)=2 years 4 months

$=2\frac{1}{3}$ years [∵ 1 year =12 months]

Amount for 2 years

∴ Amount $(A)=P\left(1+\dfrac{R}{100}\right)^n$

=Rs. $9000\left(1+\dfrac{10}{100}\right)^2$

=Rs. $9000\times\dfrac{11}{10}\times\dfrac{11}{10}$

=Rs. 10890

For the next $\frac{1}{3}$ years, Principal = Amount for 2 years =Rs. 10890.

Interest for $\frac{1}{3}$ years $=\dfrac{P\times R\times n}{100}$

$=\left(\dfrac{10890\times10\times\frac{1}{3}}{100}\right)$

=Rs. 363

So, the total Amount for $2\frac{1}{3}$ years =Rs. 10890+363=Rs. 11253

∴C.I.=A−P=Rs. 11253−Rs.9000

=Rs. 2253

(7) Find the amount of Rs 8000 for 2 years compounded annually and the rates being 9% per annum during the first year and 10% per annum during the second year.

Solution

Principal (P) = Rs. 8000 Period

(n) = 2 years Rate (R1)=9% for the first year R2=10% the second year

$\therefore$ Amount (A)= $P \left(1+\dfrac{R_1}{100}\right)^1 \left(1+\dfrac{R_2}{100}\right)^1 = 8000 \left(1+\dfrac{9}{100}\right)\left(1+\dfrac{10}{100}\right)$

$=$ Rs $8000 \times \dfrac{109}{100} \times \dfrac{110}{100} =$ Rs. 9592

(8) Anand obtained a loan of Rs 125000 from the Allahabad Bank for buying computers. The bank charges compound interest at 8% per annum, compounded annually. What amount will he have to pay after 3 years to clear the debt?

Solution

Principal (p) = 1,25,000

Rate of interest (r) = 8% p.a.

Period (n) = 3 years

$\therefore$ Amount (A) = $P\left(1+\dfrac{r}{100}\right)^n$

$=$ Rs. $125000 \times \left(1+\dfrac{8}{100}\right)^3$

$=$ Rs. $125000 \times \left(\dfrac{27}{25}\right)^3$

$=$ Rs. $125000 \times \dfrac{27}{25} \times \dfrac{27}{25} \times \dfrac{27}{25}$

$=$ Rs. 157464 Ans.

(9) Three years ago, Beeru purchased a buffalo from Surjeet for Rs 11000. What payment will discharge his debt now, the rate of interest being 10% per annum, compounded annually?

Solution

Price of a buffalo (P) = Rs. 11000

Rate of interest (R)= 10% p.a.

Period (n) = 3 years

∴ Price of buffalo at present

$(A) = \left(1 + \frac{R}{100}\right)^n$ = Rs. $11000\left(1 + \frac{10}{100}\right)^3$ = Rs. $11000 \times \left(\frac{11}{10}\right)^3$

= Rs. $11000 \times \frac{11}{10} \times \frac{11}{10} \times \frac{11}{10}$

= Rs. 14641

(10) Shubhalaxmi took a loan of Rs 18000 from Surya Finance to purchase a TV set. If the company charges interest at 12% per annum during the first year and 12(1/2)% per annum during the second year, how much will she have to pay after 2 years?

Solution:

Amount of loan taken (P) = Rs. 18000

Rate $(R_1) = 12\%$ p.a. during first year $R_1 = 12\frac{1}{2}\%$ = $\frac{25}{2}\%$ p.a. during second year

Period (n) = 2 years

∴ Total amount $(A) = P\left(1 + \frac{R_1}{100}\right)^1 \left(1 + \frac{R_2}{100}\right)^1$ = Rs. $18000\left(1 + \frac{12}{100}\right)\left(1 + \frac{25}{2 \times 100}\right)$ = Rs. $18000 \times \frac{28}{25} \times \frac{9}{8}$ = Rs. 22680

Benefits of RS Aggarwal Solutions for Class 8 Maths Chapter 11 Exercise 11.2

- **Clear Explanations:** Each solution is detailed and easy to understand, which helps students grasp the concept of compound interest and its applications more effectively.
- **Step-by-Step Guidance:** The solutions break down complex problems into manageable steps, making it easier for students to follow and learn the correct methods for calculating compound interest.
- **Practice Opportunities:** By working through these solutions, students can practice a variety of problems, reinforcing their understanding and improving their problem-solving skills.
- **Conceptual Clarity:** The solutions help clarify common doubts and misconceptions about compound interest, ensuring a solid grasp of the topic.
- **Enhanced Exam Preparation:** Regular use of these solutions can enhance students' preparation for exams by familiarizing them with different types of compound interest questions and solutions.