Name: **Grade:** **Score:**

Worksheet #5

COMPOUND INTEREST-CALCULATE COMPOUND INTEREST

Learning goal: Students will be able to understand and to find compound interest in real-life problems.

Instructions: Calculate the Compound Interest using the formula.

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

WORD PROBLEM	GIVEN	FORMULA	SUBSTITUTION
Riya opened a savings account with ₹3,200 at 4.5% annual compound interest for 3 years.			
Vikram invested ₹5,800 in a fixed deposit at 6.25% compound interest for 2 years.			
Neha saved ₹4,500 in a recurring deposit at 5.75% compound interest for 4 years.			
Arjun deposited ₹6,700 in a savings scheme at 3.8% compound interest for 5 years.			
Priyanka placed ₹8,300 in a fixed deposit at 7.2% compound interest for 3 years.			
Karan invested ₹2,800 in a government bond at 5.5% compound interest for 2 years.			
Diya saved ₹9,500 in a mutual fund at 8.4% compound interest for 4 years.			
Rohit deposited ₹12,000 in a corporate deposit at 9% compound interest for 3 years.			

Name: **Grade:** **Score:**

Worksheet #5(Answers)

COMPOUND INTEREST-CALCULATE COMPOUND INTEREST

Learning goal: Students will be able to understand and to find compound interest in real-life problems.

Instructions: Calculate the Compound Interest using the formula.

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

WORD PROBLEM	GIVEN	FORMULA	SUBSTITUTION
Riya opened a savings account with ₹3,200 at 4.5% annual compound interest for 3 years.	Principal: ₹3,200 Rate: 4.5% Time: 3 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 3200\left(1 + \frac{4.5}{100}\right)^3$ $A = 3200(1.045)^3$ $A = 3652.43$ $C.I. = 3652.43 - 3200 = 452.23$
Vikram invested ₹5,800 in a fixed deposit at 6.25% compound interest for 2 years.	Principal: ₹5,800 Rate: 6.25% Time: 2 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 5800(1.0625)^2$ $A = 6543.91$ $C.I. = 6543.91 - 5800 = 743.91$
Neha saved ₹4,500 in a recurring deposit at 5.75% compound interest for 4 years.	Principal: ₹4,500 Rate: 5.75% Time: 4 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 4500(1.0575)^4$ $A = 5628.34$ $C.I. = 5628.34 - 4500 = 1128.34$
Arjun deposited ₹6,700 in a savings scheme at 3.8% compound interest for 5 years.	Principal: ₹6,700 Rate: 3.8% Time: 5 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 6700(1.038)^5$ $A = 8072.19$ $C.I. = 8072.19 - 6700 = 1372.19$
Priyanka placed ₹8,300 in a fixed deposit at 7.2% compound interest for 3 years.	Principal: ₹8,300 Rate: 7.2% Time: 3 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 8300(1.072)^3$ $A = 10,214.57$ $C.I. = 10214.57 - 8300 = 1914.57$
Karan invested ₹2,800 in a government bond at 5.5% compound interest for 2 years.	Principal: ₹2,800 Rate: 5.5% Time: 2 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 2800(1.055)^2$ $A = 3117.47$ $C.I. = 3177.47 - 2800 = 317.47$
Diya saved ₹9,500 in a mutual fund at 8.4% compound interest for 4 years.	Principal: ₹9,500 Rate: 8.4% Time: 4 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 9500(1.084)^4$ $A = 6543.91$ $C.I. = 13156.82 - 9500 = 3656.82$
Rohit deposited ₹12,000 in a corporate deposit at 9% compound interest for 3 years.	Principal: ₹12,000 Rate: 9% Time: 3 years	$A = P\left(1 + \frac{r}{100}\right)^n$	$A = 12000(1.09)^3$ $A = 15540.12$ $C.I. = 15540.12 - 12000 = 3540.12$