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

Worksheet #2

# COMPOUND INTEREST- TIME CONVERSIONS

**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.

$$A = P\left(1 + \frac{r}{200}\right)^{2n} \quad A = P\left(1 + \frac{r}{400}\right)^{4n} \quad A = P\left(1 + \frac{r}{100}\right)^{n}$$

| Q. No. | GIVEN | QUARTERLY | HALF YEARLY | ANNUALLY |
|---|---|---|---|---|
| 1. | P = ₹3,000,<br>r = 4%, n =2years | | | |
| 2. | P = ₹7,500,<br>r=6%, n = 3 years | | | |
| 3. | P = ₹12,000,r=8%,<br>n = 4 years | | | |
| 4. | P = ₹18,000,<br>r =10%,<br>n = 5 years | | | |
| 5. | P = ₹25,000,<br>r = 12%,<br>n = 6 years | | | |

| | | | |
|---|---|---|---|
| Find the amount compounded quarterly.<br>Given:<br>P = ₹22,000,<br>r = 15%,n=6years | Find the amount compounded half yearly.<br>Given:<br>P = ₹5,500,<br>r = 6%, n=2years | Find the amount compounded quarterly.<br>Given:<br>P = ₹8,000,<br>r =8%, n=3years | Find the amount compounded yearly.<br>Given:<br>P = ₹11,000,<br>r=10%, n=4 years |
| | | | |

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

Worksheet #2 (Answers)

# COMPOUND INTEREST- TIME CONVERSIONS

**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.

$$A = P\left(1 + \frac{r}{200}\right)^{2n} \quad A = P\left(1 + \frac{r}{400}\right)^{4n} \quad A = P\left(1 + \frac{r}{100}\right)^{n}$$

| Q. No. | GIVEN | QUARTERLY | HALF YEARLY | ANNUALLY |
|---|---|---|---|---|
| 1. | P = ₹3,000, r = 4%, n =2years | $A = 3000\left(1 + \frac{4}{400}\right)^{4\times2}$ ₹3,249.44 | $A = 3000\left(1 + \frac{4}{200}\right)^{2\times2}$ ₹3,246.48 | $A = 3000\left(1 + \frac{4}{100}\right)^{2}$ ₹3,244.80 |
| 2. | P = ₹7,500,r=6%, n = 3 years | $A = 7500\left(1 + \frac{6}{400}\right)^{4\times3}$ ₹8,988.79 | $A = 7500\left(1 + \frac{6}{200}\right)^{2\times3}$ ₹8,979.08 | $A = 7500\left(1 + \frac{6}{100}\right)^{3}$ ₹8,948.40 |
| 3. | P = ₹12,000,r=8%, n = 4 years | $A = 12000\left(1 + \frac{8}{400}\right)^{4\times4}$ ₹16,326.53 | $A = 12000\left(1 + \frac{8}{200}\right)^{2\times4}$ ₹16,279.34 | $A = 12000\left(1 + \frac{8}{100}\right)^{4}$ ₹16,127.42 |
| 4. | P = ₹18,000, r =10%, n = 5 years | $A = 18000\left(1 + \frac{10}{400}\right)^{4\times5}$ ₹29,542.37 | $A = 18000\left(1 + \frac{10}{200}\right)^{2\times5}$ ₹29,180.34 | $A = 18000\left(1 + \frac{10}{100}\right)^{5}$ ₹28,943.17 |
| 5. | P = ₹25,000, r = 12%, n = 6 years | $A = 25000\left(1 + \frac{12}{400}\right)^{4\times6}$ ₹50,361.02 | $A = 25000\left(1 + \frac{12}{200}\right)^{2\times6}$ ₹49,771.20 | $A = 25000\left(1 + \frac{12}{100}\right)^{6}$ ₹49,059.96 |

| | | | |
|---|---|---|---|
| Find the amount compounded quarterly. Given: P = ₹22,000, r = 15%,n=6years | Find the amount compounded half yearly. Given: P = ₹5,500, r = 6%, n=2years | Find the amount compounded quarterly. Given: P = ₹8,000, r =8%, n=3years | Find the amount compounded yearly. Given: P = ₹11,000, r=10%, n=4 years |
| **₹52,123.45** | **₹6,188.64** | **₹10,168.24** | **₹15,937.42** |