

Compound Interest Ex 14.2 Q14

## Answer:

## Given:

$$P = Rs 15,625$$

$$R = 16\% = \frac{16}{4} = 4\%$$
 quarterly

$$n = 9 \text{ months} = 3 \text{ quarters}$$

## We know that:

$$A = P \Big( 1 + \tfrac{R}{100} \Big)^n$$

= Rs 
$$15,625 \left(1 + \frac{4}{100}\right)^3$$

$$= \text{Rs } 15,625(1.04)^3$$

$$= Rs 17,576$$

Also,

$$CI = A - P$$

$$= Rs 17,576 - Rs 15,625$$

$$=$$
Rs  $1,951$ 

Thus, the required compound interest is Rs 1,951.

Compound Interest Ex 14.2 Q15 **Answer:** 

## Given:

P = Rs 16,000

R = 20% p.a.

n = 1 year

We know that:

$$\mathbf{A} = \mathbf{P} \Big( 1 + \frac{\mathbf{R}}{100} \Big)^{\mathbf{n}}$$

When compounded quarterly, we have:

$$\mathbf{A} = \mathbf{P} \Big( 1 + \frac{\mathbf{R}}{400} \Big)^{4\mathbf{n}}$$

$$=$$
 Rs  $16,000 \left(1 + \frac{20}{400}\right)^4$ 

$$= \text{Rs } 16,000(1.05)^4$$

$$=$$
Rs 19,448.10

Also,

$$CI = A - P$$

$$= Rs 19,448.1 - Rs 16,000$$

$$=$$
Rs 3,448.10

Thus, the interest received by Rekha after one year is Rs 3,448.10.

Compound Interest Ex 14.2 Q16

Answer:

Given:

P = Rs 12,500

 $R_1=15\%$  p.a.

 $R_2 = 16\%$  p.a.

... Amount after two years =  $P\left(1 + \frac{R_1}{100}\right)\left(1 + \frac{R_2}{100}\right)$ 

= Rs 
$$12,500 \left(1 + \frac{15}{100}\right) \left(1 + \frac{16}{100}\right)$$

- = Rs 12,500(1.15)(1.16)
- = Rs 16,675

Thus, the required amount is Rs 16,675.

\*\*\*\*\*\*\*\* END \*\*\*\*\*\*\*