



Name of the Bundle	Advanced Bundle V2	Subject	Aptitude
Topic	Simple Interest	Last updated on	13 November 2024

1. Calculate the simple interest on a principal of Rs5000 lent at a rate of 10% for 2 years.
 - a. 500
 - b. 1000
 - c. 1500
 - d. 2000

Ans: b. 500

Explanation:

Method 1: By using Formula

$$SI = \frac{PRT}{100}$$

$$= \frac{(5000 \times 10 \times 2)}{100}$$

$$= 1000$$

Method 2: By Percentage

Hint: Consider Principal as 100%

SI as $rt\%$ (Product of rate and time period)

So, Here	%	Rs
	100	5000
	20	1000



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2. Calculate the Amount on a principal of Rs1000 lent at a rate of 10% for simple interest for 2 years.
- 1200
 - 2000
 - 1500
 - 1000

Ans: a. 1200

Explanation:

Method 1:

$$SI = (1000 \times 10 \times 2) / 100 = 200$$

$$\text{Amount} = P + SI = 1000 + 200 = 1200$$

Method 2: Percentage Method

%	Rs
100	1000
120	1200

3. A sum of ₹4000 was lent at a simple interest rate of 5% per annum for a period of 2 years. How much interest was earned?
- 400
 - 600
 - 800
 - 1000

Ans: a. 400

Explanation: P=4000, R=5%, T=2 Years

$$SI = PRT/100$$

$$= (4000 \times 5 \times 2) / 100$$

$$= 400$$



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4. The simple interest on a certain sum at 15% p.a for three years is Rs.7200.The sum is_____.
- a. 16000
 - b. 24000
 - c. 32000
 - d. 48000

Ans: a. 16000

Explanation:

$P=?$, $R=15\%$, $T=3$ Years, $SI= 7200$

$$SI =PRT/100$$

$$7200 = (P*15*3) /100$$

$$=16000$$

5. A person deposits ₹8000 in a bank which pays 8%p.a simple interest. The amount after 8 years will be _____.
- a. 39120
 - b. 13120
 - c. 29544
 - d. 69359

Ans: b. 13120

Explanation:

$P=8000$, $R=8\%$, $T=8$ Years, $SI= ?$

%	Rs
100	8000
164	13120



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6. The simple interest on a principal for 6 months at an interest rate of 10% per annum is 100. What is the principal?
- 1000
 - 10000
 - 2000
 - 6000

Ans: c. 2000

Explanation:

$P=?$, $R=10\%$ per annum, $T=1$ Year, $SI= 100$ for 6 months, 200 for 1 year.

%	Rs	$r= 10\%$ For 1 Year
5	100	$r= 5\%$ For 6 months
100	2000	

7. ₹480 is invested at simple interest. It becomes ₹520 after 20 months. What is the interest rate per annum?
- 6%
 - 5%
 - 8%
 - 4%

Ans: b. 5%

Explanation: $P=480$, $R=?$, $T=20$ Years 1 year + 8 months $=20/12=5/3$, Amount =520

Amount +SI =Principal

$$520+SI=480$$

$$SI=520-480=40$$

$$SI=40$$

$$SI=PRT/100$$

$$40=(480*R*5)/100*3$$

$$R=5\%$$



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8. Find the total amount receivable on ₹8000 at 12% simple interest for 5 years.

- a. Rs.22000
- b. Rs.22300
- c. Rs.20400
- d. Rs.12800

Ans: d. Rs. 12800

Explanation:

$P=8000, R=12\%, T=5$ Years, Amount =?

%	Rs
100	8000
160	12800

9. Find the total amount receivable of ₹10000 at 10% simple interest for 5 years.

- a. Rs.2000
- b. Rs.2500
- c. Rs.5000
- d. Rs.15000

Ans: d. Rs. 15000

Explanation:

$P=10000, R=10\%, T=5$ Years, Amount =?

%	Rs
100	10000
150	15000



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10. A sum of ₹1500 is invested at simple interest for x months. If the rate of interest is $x/8\%$ per annum, then the sum grows to ₹1590. What is the value of x?

- a. 3.2 months
- b. 2.4 months
- c. 32 months
- d. 24 months

Ans: d. 24 months

Explanation:

$P=1500$, $R=x/8\%$, $T=x$ months, Amount=1590

$$SI=A-P \quad 1590-1500 =90$$

%	Rs
100	1500
$X^2 / (8*12)$?
9600	1500
X^2	24

$$X^2 = 192 * 3 = 576$$

Taking Square root, We get $X = 24$ months.



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11. In how many years shall ₹3500 invested at the rate of 10% simple interest per annum, amounts to ₹4500.

- a. $2 \frac{5}{7}$ years
- b. $2 \frac{6}{7}$ years
- c. $2 \frac{4}{7}$ years
- d. $2 \frac{3}{7}$ years

Ans: b. $2 \frac{6}{7}$ years

Explanation:

$$P=3500, R=10\%, T=?, \text{Amount}=4500, SI=A-P = 4500-3500 =1000$$

$$SI=PRT/100$$

$$1000=(3500*10*T)/100$$

$$=2 \frac{6}{7} \text{ Years.}$$

12. A person invests money in three different schemes for 6 years, 10 years and 12 years at 10%, 12% and 15% simple interest respectively. At the completion of each scheme, he gets the same interest. The ratio of his investment is

- a. 6: 3: 2
- b. 3 :2 :5
- c. 3: 4 : 6
- d. 60:120:180

Ans: a. 6: 3: 2

Explanation:

$$SI=(PRT)/100; \quad P \text{ directly proportional to SI.}$$

$$S_1=R_1*T_1. =6*10 =60$$

$$S_2=R_2*T_2. =10*12 =120$$

$$S_3=R_3*T_3 =12*15 =180$$

$$\text{Taking Ratio, } x:2y:3z=k \Rightarrow 1: 1/2: 1/3 \Rightarrow 6: 3: 2$$



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13. Ashok deposited ₹10000 in bank at a rate of 8% per annum. Find a simple interest for 5 years.

- a. 2000
- b. 4000
- c. 2500
- d. 2000

Ans: b. 4000

Explanation:

$P=10000, R=8\%, T=5, SI=?$

%	Rs
100	10000
40	4000

14. Kamal invested ₹30000 to a 1 year at 7% per annum. Find the simple interest and amount received by him at the end of one year.

- a. 2100,32100
- b. 1800,25300
- c. 2100,31200
- d. 4200,21300

Ans: c. 2100, 31200

Explanation:

$P=30000, R=7\%, T=1, SI=?, \text{Amount}=?$

%	Rs
100	30000
7	2100
107	32100



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15. The simple interest on ₹68000 at 16 2/3% per annum for 9 months is_____.

- a. 2550
- b. 6500
- c. 8500
- d. 85000

Ans: c. 8500

Explanation:

$P=68000, R=16\frac{2}{3}\%, T=9\text{ months}, SI=?$

$$SI = \frac{PRT}{100} = \frac{(68000 \times 50/3 \times 9/12)}{100} = 8500$$

16. Find the simple interest for ₹6750 for 219 days at 10% earned per annum.

- a. 399
- b. 155
- c. 450
- d. 405

Ans: d. 405

Explanation:

$P=6750, R=10\%, T=219\text{ days}, SI=?$

$$\begin{aligned} SI &= \frac{PRT}{100} \\ &= \frac{(6750 \times 219/365 \times 10)}{100} \\ &= 405 \end{aligned}$$



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17. If the ratio of principal and the simple interest for 5 years is 10:7, then the rate of interest per annum is

- a. 15%
- b. 20%
- c. 10%
- d. 14%

Ans: d. 14%

Explanation:

$P : SI = 10:7$, $T=5$ years, $R=?$, $SI=?$

%	Ratio
100	10(principal ratio)
5r	14%

18. The simple interest on a sum of money is $\frac{9}{35}$ of the sum.If the number of years is numerically $\frac{5}{7}$ times of rate percent per annum, then the $r\%$ p.a is ____.

- a. 9%
- b. 7%
- c. 6 %
- d. 4%

Ans: c. 6%

Explanation:

$SI=\frac{9}{35}P$, $T=\frac{5}{7}R$, $SI: P=9: 35$

%	Ratio
100	35(principal ratio)
$(\frac{5}{7}) R^2$	9 (SI Ratio)
700	35
$5R^2$	9

Solving We get $R^2=36$; Then taking square root $R = 6$



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19. Ramesh borrows a sum of ₹90,000 for 4 years at 5% simple interest. He lends it to Suresh at 7% for 4 years at simple interest. What is his gain?

- a. 8000
- b. 7200
- c. 7500
- d. 90000

Ans: b. 7200

Explanation:

$P = 90000$, $T = 4$ years , $R_1 = 5\%$, $R_2 = 7\%$

%	Rs
100	90000
20	18000
%	Rs
100	90000
28	25200

Taking Difference = $25200 - 18000 = 7200$



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20. A sum doubles in 7 years at a simple interest. Find the time in which the sum will become 5 times at the same rate of interest.

- 35 years
- 21 years
- 28 years
- 42 years

Ans: c. 28 years

Explanation:

Sum (Increase)	Years
P---> 2P 1 (time)	7
P---> 5P 4(time)	28

21. After Certain time, the ratio of principal and amount is 5:6. After 8 years their ratio becomes 1:2. Find the rate of interest.

- 15%
- 10%
- 20%
- 12%

Ans: b. 10 %

Explanation:

P : A	To make the Ratio of principal equal
5 : 6	5 : 6
8YEARS	
1 : 2	5 : 10
	$4 = \frac{P \cdot R \cdot T}{100}$
	$4 = \frac{5 \cdot R \cdot 8}{100}$
	R=10%



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23. If the annual rate of simple interest increases from 11% to 17 ½%, a person's yearly income increases by 1071.20. The principal amount invested in Rupee is _____.

- a. 17,250
- b. 19120
- c. 10710
- d. 16480

Ans: d. 16480

Explanation:

$$\text{Difference in R\%} = 17.5\% - 11\% = 6.5\%$$

%	Amount
6.5	1071.2
100	16480

24. At the rate of 8% the amount invested earns a simple interest of Rs 240 after 3 years. If the rate of interest was 5% more, then how much more interest would it have earned?

- a. 105
- b. 180
- c. 150
- d. 135

Ans: c. 150

Explanation:

$$SI = R \times T$$

R*T	Rs
-----	----

24	240	How much more interest earned=
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(13)*3	390	390-240=150
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$$(8\% + 5\%) \Rightarrow (5\% \text{ more})$$



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25. A sum at a certain rate of simple interest becomes Rs.14880 after 3 years and Rs 16800 after 5 years. Find the simple interest on the same sum at 10% per annum for 4 years.

- a. 4800
- b. 5184
- c. 4740
- d. 4860

Ans: a. 4800

Explanation:

P=?, Amount =14880 after 3 years , Amount 16800 after 5 years

Taking Difference, we get the amount for 2 years. 16800-14880=1920

Year	SI
2	1920
3	2880

To find the principal P=? from amount of 3 years 16880-2880=12000

P=12000, R=10% , T=4

SI=(P*R*T)/100 => (12000*10*4)/100=4800



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26. A certain sum amounts to Rs 4600 after 5 years and to Rs 6000 after 8 years at the same rate of interest per annum. What will be the simple interest on a sum of Rs 8500 for 6 ½ years at the same rate?

- Rs.11,375
- Rs.11,460
- Rs.10,215
- Rs.10,515

Ans: a. Rs. 11,375

Explanation:

P	→	4600	→	6000
5 Y				8 Y
YEAR				SI
3				1400 (6000-4600)
5		7000/3	→	SI for 5 yrs

To find principal P=? For 5 Yrs Amount=4600 SI=4600-7000/3

$$\text{Principal} = \frac{6800}{3}$$

$$P = \frac{6800}{3} \quad \text{SI} = \frac{PRT}{100}$$

$$\text{SI} = \frac{7000}{3} \quad \frac{7000}{3} = \frac{(\frac{6800}{3})(R)(5)}{100}, \quad R=?, \quad T=5 \text{ yrs}$$

$$\text{Rate} = \frac{350}{17}$$

$$\text{For } P=8500, R=\frac{350}{17}\%, T=6 \frac{1}{2} \text{ Yrs, SI} = \frac{(PRT)}{100}$$

$$= (8500) * (\frac{350}{17}) * (\frac{13}{2}) / 100$$

$$= 11375$$



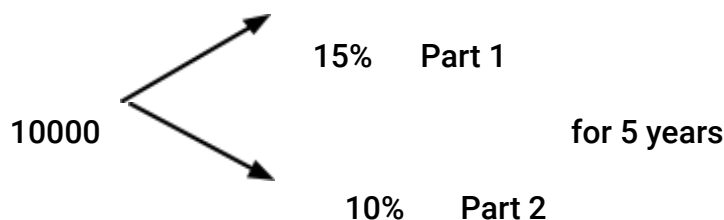
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27. A man has Rs 10,000. He lent a part of it at 15% simple interest and the remaining at 10% simple interest. The total interest he received after 5 years amounted to 6500. The difference between the parts of the amount he lent is

- _____.
- a. 2000
 - b. 2500
 - c. 1500
 - d. 1750

Ans: a. 2000

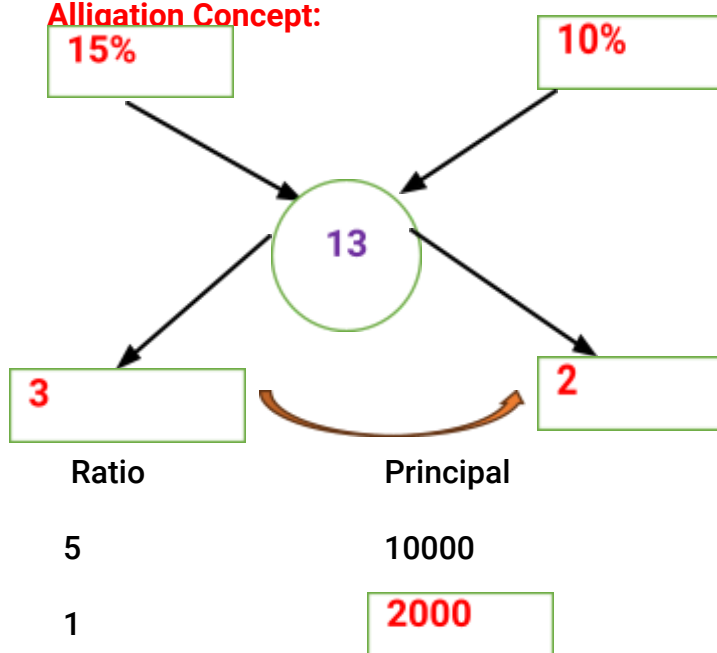
Explanation:



$$SI = SI_1 + SI_2 = 6500, R = (SI/P) * (100/T)$$

$$= (6500/10000) * (100/5) = > R = 13\%$$

Alligation Concept:





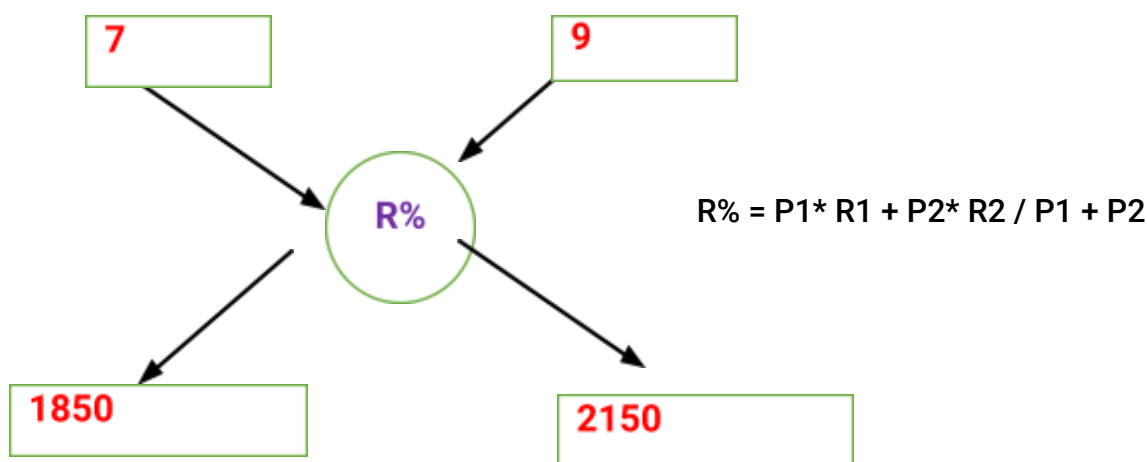
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28. A man deposited Rs.1850 in a bank at 7% per annum and Rs.2150 in another bank at 9% per annum. Find the rate of interest for the whole sum.

- a. 8.133%
- b. 8.075%
- c. 8.25%
- d. 8.375%

Ans: b. 8.075%

Explanation:



$$= \frac{(7 * 1850) + (9 * 2150)}{37 + 43}$$

$$= 8.075\%$$



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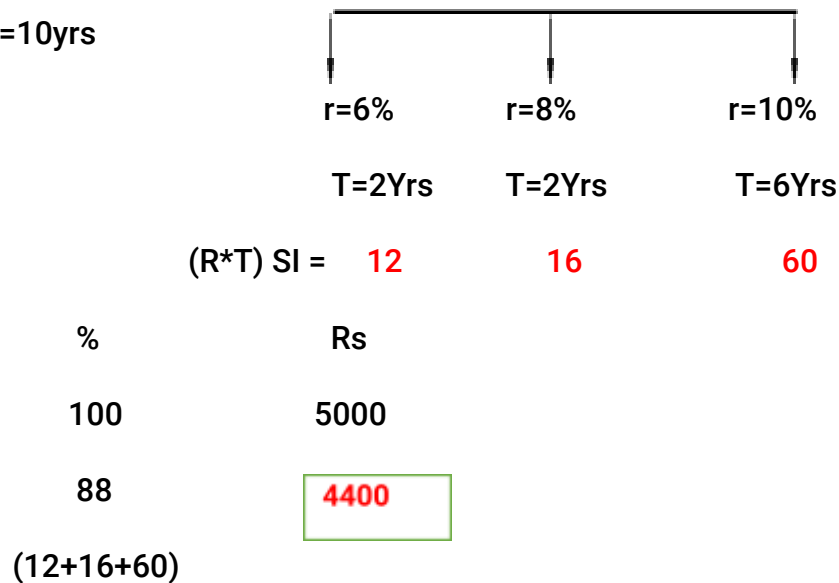
29. Anil lent a sum of Rs.5,000 on a simple interest for 10 years in such a way that the rate of interest is 6% per annum for the first 2 years, 8% per annum for the next 2 years and 10% per annum beyond 4 years. How much interest (in Rs) will he earn at the end of 10 years?

- a. 5000
- b. 4400
- c. 4200
- d. 3500

Ans: b. 4400

Explanation:

P=5000, T=10yrs





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30. A person borrowed Rs1200 at 8% p.a and Rs.1800 at 10% p.a as simple interest for the same period. He has to pay Rs.1380 in total as interest. Find the time period.

- a. 10 Years
- b. 5 Years
- c. 6 Years
- d. 4 Years

Ans: b. 5 Years

Explanation:

$$P1=1200, R1=8\%$$

$$P2=1800, R2=10\%, SI=1380, T=?$$

$$SI = (P1 \cdot R1 \cdot T1) / 100 + (P2 \cdot R2 \cdot T2) / 100$$

$$1380 = (1200 \cdot 8 \cdot T) / 100 + (1800 \cdot 10 \cdot T) / 100$$

$$1380 = 96T + 180T \Rightarrow T = 5 \text{ Years.}$$



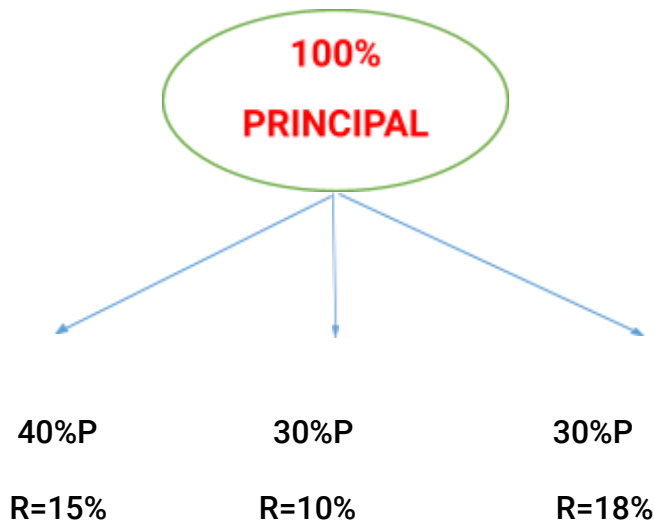
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31. A person lends 40% of his sum of money at 15% per annum, 50% of rest at 10% per annum and the rest at 18% per annum as rates of interest, If the interest is calculated on the whole sum then what would be the annual rate of interest.

- a. 13.4%
- b. 14.33%
- c. 14.4%
- d. 13.33%

Ans: c. 14.4%

Explanation:



$$\text{Average}(R) = \frac{(p_1 \cdot r_1) + (p_2 \cdot r_2) + (p_3 \cdot r_3)}{(P_1 + P_2 + P_3)}$$

$$\text{Average(Rate) } = \frac{(600 + 300 + 540)}{100} = 14.4\%$$