



MATHS

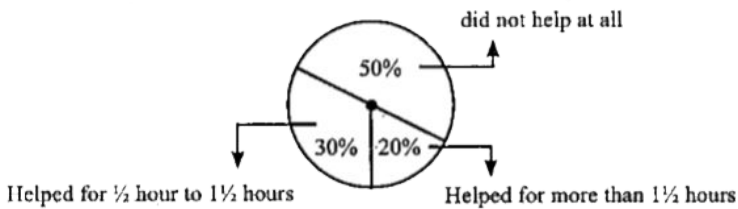
BOOKS - NAND LAL PUBLICATION

COMPARING QUANTITIES

Try These

1. In a primary school, the parents were asked about the number of hours they spent per day in helping their children to do homework.

There were 90 parents who helped for $\frac{1}{2}$ hour to $1\frac{1}{2}$ hours. The distribution of parents according to the time for which, they said they helped is given in the figure below : 20% helped for more than $1\frac{1}{2}$ hours per day, 30% helped for $\frac{1}{2}$ hour to $1\frac{1}{2}$ hours, 50% did not help at all.



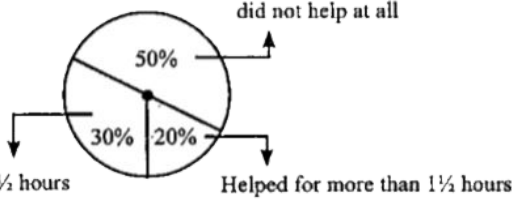
Using this, answer the following:

How many parents were surveyed?



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2. In a primary school, the parents were asked about the number of hours they spent per day in helping their children to do homework. There were 90 parents who helped for $\frac{1}{2}$ hour to $1\frac{1}{2}$ hours. The distribution of parents according to the time for which, they said they helped is given in the figure below : 20 % helped for more than $1\frac{1}{2}$ hours per day, 30 % helped for $\frac{1}{2}$ hour to $1\frac{1}{2}$ hours, 50 % did not help at all.



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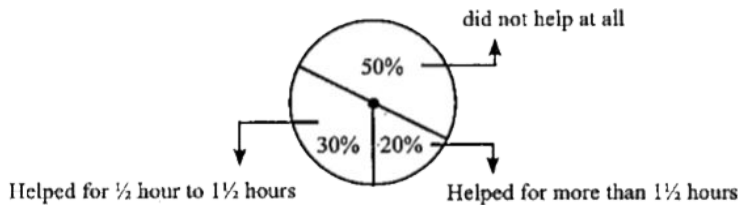
How many said that they did not help?



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3. In a primary school, the parents were asked about the number of hours they spent per day in helping their children to do home work. There were 90 parents who helped for $\frac{1}{2}$ hour to $1\frac{1}{2}$ hours. The distribution of parents

according to the time for which, they said they helped is given in the figure below : 20 % helped for more than $1\frac{1}{2}$ hours per day, 30 % helped for $\frac{1}{2}$ hour to $1\frac{1}{2}$ hours, 50 % did not help at all.



Using this, answer the following:

How many said that they helped for more than $1\frac{1}{2}$ hours?



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4. A shop gives 20 % discount. What would the sale price of each of these be ?

A dress marked at Rs. 120.



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5. A shop gives 20 % discount. What would the sale price of each of these be ?

A pair of shoes marked at Rs. 750.



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6. A shop gives 20 % discount. What would the sale price of each of these be ?

A bag marked at Rs.250.



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7. A table marked at Rs.15,000 is available for Rs. 14,400. Find the discount given and the discount per cent.



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8. An almirah is sold at Rs.5225 after allowing a discount of 5%. Find its marked price.



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9. Your bill in a shop is Rs 577.80.

Try estimating 20 % of the same bill amount.



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10. Your bill in a shop is Rs 577.80.

Try finding 15 % of Rs 375



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11. Find selling price (SP) if a profit of 5% is made on :

a cycle of Rs.700 with Rs.50 as overhead charges.



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12. Find selling price (SP) if a profit of 5% is made on :

a lawn mower bought at Rs.1150 with Rs. 50 as transportation charges.



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13. Find selling price (SP) if a profit of 5% is made on :

a fan bought for Rs.560 and expenses of Rs.40 made on its repairs.



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14. A shopkeeper bought two TV sets at Rs.10,000 each.He sold one at a profit of 10 % and the other at a loss of 10 %.Find whether he made an overall profit or loss.



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15. Find the interest and amount to be paid on Rs 15000 at 5% per annum after 2 years



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16. Find CI on a sum of Rs. 8000 ofr 2 yeas at 5% per annum comounded annually.



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17. Find the time period and rate for each.

A sum taken for $1\frac{1}{2}$ years at 8% per annum is compounded half yearly.



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18. Find a time period and a rate for each A sum taken for 2 years at 4% per annum is compounded half yearly.



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19. At the end of 2 years on Rs.2,400 at 5% per annum compounded annually.



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20. At the end of 1 year on Rs.1,800 at 8% per annum compounded quarterly.



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21. A machinery worth Rs.10,500 depreciated by 5% .Find its value after one year.



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22. Find population of a city after 2 years, which is at present 12 lakh, if the rate of increase is 4%.



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Think Discuss And Write

1. Two times a number is a 100% increase in the number. If we take half the number, what would be the decrease in percent?



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2. By what per cent is Rs. 2,000 less than Rs. 2,400 ?



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Exercise 8 1

1. Find the ratio of the following: Speed of a cycle 15 km per hour to the speed of scoter 30 km per hour.



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2. Find the ratio of the following: 5 m to 10 km



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3. Find the ratio of the following: 50 paise to
Rs 5



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4. Convert the following ratios to percentages

: 3 : 4



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5. Find the ratio fo the following

2:3



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6. 72% of 25 students are good in mathematics. How many are not good in mathematics?



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7. A football team won 10 matches out of the total number of matches they played. If their win percentage was 40, then how many matches did they play in all?



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8. If Chemeli had Rs 600 left after spending 75% of her money, how much did she have in the beginning?



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9. If 60% people in a city like cricket, 30% like football and the remaining like other games, then what per cent of the people like other games? If the total number of people are 50

lakh, find the exact number who like each type of game.



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Exercise 8 2

1. A man got a 10% increase in his salary. If his new salary is Rs 1,54,000, find his original salary.



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2. On Sunday 845 people went to the Zoo. On Monday only 169 people went. What is the per cent decrease in the people visiting the Zoo on Monday?



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3. A shopkeeper buys 80 articles for Rs 2,400 and sells them for a profit of 16%. Find the selling price of one article.



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4. The cost of an article was Rs 15,500. Rs 450 were spent on its repairs. If it is sold for a profit of 15%, find the selling price of the article.



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5. A VCR and TV were bought for Rs 8,000 each. The shopkeeper made a loss of 4% on the VCR and a profit of 8% on the TV. Find the gain or loss percent on the whole transaction.



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6. During a sale, a shop offered a discount of 10% on the marked prices of all the items. What would a customer have to pay for a pair of jeans marked at Rs 1450 and two shirts marked at Rs 850 each?



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7. A milkman sold two of his buffaloes for Rs 20,000 each. On one he made a gain of 5% and on the other a loss of 10%. Find his overall gain or loss.



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8. The price of a TV is Rs 13,000. The sales tax charged on it is at the rate of 12%. Find the amount that Vinod will have to pay if he buys it.





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9. Arun bought a pair of skates at a sale where the discount given was 20%. If the amount he pays is Rs 1,600, find the marked price.



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10. I purchased a hair-dryer for Rs 5,400 including 8% VAT. Find the price before VAT was added.



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11. An article was purchased for Rs 1239 Including GST of 18%. Find the price of the article before GST was added ?



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Exercise 8 3

1. Calculate the amount and compound interest on : Rs 10,800 for 3 years $12\frac{1}{2}\%$ per

annum compounded annually.



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2. Calculate the amount and compound interest on : Rs 18,000 for $2\frac{1}{2}$ years at 10% per annum compounded annually.



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3. Calculate the amount and compound interest on : Rs 62,500 for $1\frac{1}{2}$ years at 8% per

annum compounded half yearly.



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4. Calculate the amount and compound interest on : Rs8,000 for 1 year at 9% per annum compounded half yearly. (You could use the year by year calculation using SI formula to verify).



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5. Calculate the amount and compound interest on : Rs 10,000 for 1 year at 8% per annum compounded half yearly.



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6. Kamala borrowed Rs 26,400 from a Bank to buy a scooter at a rate of 15% p.a. compounded yearly. what amount will she pay at the end of 2 years and 4 months to clear the loan?





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7. Fabina borrows Rs 12,500 at 12% per annum for 3 years at simple interest and Radha borrows the same amount for the same time period at 10% per annum, compounded annually. Who pays more interest and by how much?



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8. I borrowed Rs 12,000 from Jamshed at 6% per annum simple interest for 2 years. Had I borrowed this sum at 6% per annum compound interest, what extra amount would I have to pay?



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9. Vasudevan invested 60,000 at an interest rate of 12% per annum compounded half

yearly. What amount would he get after 6 months?



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10. Vasudevan invested Rs 60,000 at an interest rate of 12% per annum compounded half yearly. What amount would he get after 1 year?



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11. Arif took a loan of Rs 80,000 from a bank. If the rate of interest is 10% per annum, find the difference in amounts he would be paying after $1\frac{1}{2}$ years if the interest is : compounded annually.



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12. Arif took a loan of Rs 80,000 from a bank. If the rate of interest is 10% per annum, find the difference in amounts he would be paying

after $1\frac{1}{2}$ years if the interest is : compounded
half yearly



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13. Maria invested Rs 8,000 in a business. She would be paid interest at 5% per annum compounded annually. Find : The amount credited against her name at the end of the second year.



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14. Maria invested Rs 8,000 in a business. She would be paid interest at 5% per annum compounded annually. Find : The interest for the 3rd year.



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15. Find the amount and the compound interest on Rs 10,000 for $1\frac{1}{2}$ years at 10% per annum, compounded half yearly. Would this interest be more than the interest he would get if it was compounded annually?



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16. Find the amount which Ram will get on Rs.4096,if he gave it for 18 months at $12\frac{1}{2}\%$ per annum, interest being comounded half yearly.



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17. The population of a place increased to 54,000 in 2003 at a rate of 5% per annum :

find the population in 2001.



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18. The population of a place increased to 54,000 in 2003 at a rate of 5% per annum : what would be its population in 2005?



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19. In a Laboratory, the count of bacteria in a certain experiment was increasing at the rate

of 2.5% per hour. Find the bacteria at the end of 2 hours if the count was initially 5, 06,000.



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20. A scooter was bought at Rs 42,000. Its value depreciated at the rate of 8% per annum. Find its value after one year.



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Additional Questions For Practice Objective Type Questions

1. If the S.P. of 5 pens is equal to C.P. of 4 pen then % age of loss incurred is

A. 75 %

B. 20 %

C. 15 %

D. None of these

Answer:



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2. In the formula $A = P\left(1 + \frac{\gamma}{100}\right)^n$ for calculating compound interest, A stands for

- A. Time period
- B. Interest
- C. Principal +Interest
- D. None of these

Answer:



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3. Formula for calculating simple interest is

A. $\frac{P + R + T}{100}$

B. $I = \frac{P \times R}{T \times 100}$

C. $I = \frac{P \times R \times T}{100}$

D. None of these

Answer:



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4. Incentive given by the seller to the customers is

A. List price

B. Sale price

C. discount

D. None of these

Answer:



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5. The time period and the rate for a sum taken at 10% p.a. for $1\frac{1}{2}$ year compounded half yearly are

A. $n = 3, R = 5\%$

B. $n = 6, R = 2\%$

C. $n = 5, R = 3\%$

D. None of these

Answer:



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6. 36% of 600 is the cube of

A. 3

B. 6

C. 9

D. None of these

Answer:



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7. If the price of the product including 28% GST is 7448 then its original cost is

A. 2660

B. 26600

C. 266000

D. None of these

Answer:



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Additional Questions For Practice State Whether The Following Statements Are True Or False

1. Discount is always calculated on Marked price.



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2. Compound Interest is calculated on the principal of the previous year.



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3. The decrease of the value per year of the article is called the rate of depreciation.



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4. If the sum borrowed on simple interest for 10 years doubles itself then the rate percent is 5%.



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5. These days sale tax is known as _____



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6. A handkerchief marked for Rs. 60 is sold for Rs. 48 then the discount offered is 30%.



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7. Rate for the sum taken for 2 years at 8% p.a. compounded quarterly is _____



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Additional Questions For Practice Fill In The Blanks

1. The difference between the discount and the marked price is called its sale price.



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2. GST is charged on ____ of the article.



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3. In simple interest principal remains constant for the whole loan period?



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4. The time period for the sum taken for $1\frac{1}{2}$ year at 5% per annum compounded quarterly is 6 quarter years.



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5. The ratio 3 : 4 in percentage is 75%.



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6. The buying price when 5% GST is added on the purchase of soap at Rs. 50 is Rs. 52.5.



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7. Selling price of book, if 10% profit is made on purchase of book costing Rs.100 is Rs. 110.



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Additional Questions For Practice Short Answer Type Questions

1. Raman purchased a dining table marked at Rs. 9800. He paid Rs. 11025 Including GST. Find the rate of GST.



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2. In how many years will Rs. 4000 amount will be Rs. 5324 at 10% p.a. compound Interest.



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3. What amount is to be repaid on a loan on of Rs 5000 for $1\frac{1}{2}$ year at 10% p.a. compounded half yearly.



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4. After allowing a discount of 20% on an article is sold for Rs. 2,400. Find the marked price of the article.



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Additional Questions For Practice Long Answer Type Questions

1. Cost of 25 apples is equal to S.P. of 20 apples. Find the profit percent.



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2. Price of petrol increased by 10% last year. Now the prices are reduced by 10%. Find the net increase or decrease in the price of petrol.



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3. Aashi read 30% of the total pages of the book. Next day she read 70% of the remaining pages. If 42 pages are yet to be read. Find the total number of pages in the book.



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4. Mohan's Income is 40% more than that Adarsh. By what percent Adarsh's Income is less than Mohan's Income.



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Additional Questions For Practice High Order Thinking Skill

1. The purchase of some product A was 2,50,000 in 2004. It increased the following year by 5% but in 2006, it decreased by 2%. Find the net increase or decrease in the purchase of product.



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Solution To Sample Paper Answer The Multiple Choice Questions

1. If S.P. of an article is thrice its C.P. then profit percent is

A. 100 %

B. 200 %

C. 300 %

D. None of these

Answer:



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2. Simple Interest on a sum of Rs. 3300 is Rs. 550. If the time in years is 5 then, its rate is

A. $3\frac{1}{3}\%$

B. 3%

C. $3\frac{2}{3}\%$

D. None of these

Answer:



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3. A towel marked Rs.96 is sold for Rs. 72. The discount offered is

A. 25 %

B. 30 %

C. 4 %

D. None of these

Answer:



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4. Compound interest on Rs. 1000 at 10% for 1 year is

A. Rs. 1100

B. Rs. 100

C. Rs. 1000

D. None of these

Answer:



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5. State whether the following statements are true or false.

Simple interest for 1 year is same as compound interest for 1 year compounded annually.



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Solution To Sample Paper

1. State whether the following statements are true or false.

Sale tax is always charged on marked price.



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2. State whether the following statements are true or false.

Overhead expenses are always added to the original cost to get the total cost.



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3. State whether the following statements are true or false.

If S.P. is more than the C.P. Shopkeeper suffers loss.



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4. Fill in the blanks.

The deduction made on the marked price is called the discount.



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5. Fill in the blanks.

Profit % or Loss % is always calculated on



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6. Fill in the blanks.

In compound interest principal _____ every
year.



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7. Fill in the blanks.

Additional expenses made while buying/selling the article are referred to as _____ expenses.



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8. What happens to the time period and the rate when.

The interest is compounded half yearly.



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9. What happens to the time period and the rate when.

The interest is compounded quarterly.



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10. An article was sold for Rs. 2400. He was also charged 2.40 VAT. Find the rate of VAT.



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11. The time interval of 4 minutes 20 second is read as 4 minutes 22 second. Find the percentage error.



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12. Manish sold a mobile phone at a profit 10%. Had it been sold for Rs. 100 more than profit would have been 20%. Find the C.P. of the mobile phone.



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13. The difference between two S.P. s of a chair at profit of 6% and 7% is Rs. 10. Find the C.P. of the chair.



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14. Find the amount and the compound interest on Rs. 10,000 compound annual at $2\frac{1}{2}$ year at 4% per annum.



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