

# Ravi Maths Tuition Centre

## Comparing Quantities

8th Standard

Mathematics

$$57 \times 1 = 57$$

- 1) By selling 50 items, a shopkeeper lost the amount equal to the selling price of 10 items. His loss per cent is  
(a)  $\frac{30}{7}\%$  (b)  $\frac{40}{3}\%$  (c)  $\frac{25}{3}\%$  (d)  $\frac{50}{3}\%$
- 2) After allowing a discount of 15% on the market price of a pen drive, it is sold for Rs 680. The market price of the article is  
(a) Rs 700 (b) Rs 600 (c) Rs 800 (d) Rs 750
- 3) If  $\frac{22}{7}\%$  of a number is 308, then the number is  
(a) 9600 (b) 9800 (c) 8800 (d) 4900
- 4) Sachin purchases a bat for Rs 660 including sales tax. If the rate of sales tax is 10%, then the selling price of the bat is  
(a) Rs 580 (b) Rs 590 (c) Rs 600 (d) Rs 610
- 5) To gain 25% after allowing a discount of 10%, the shopkeeper must mark the price of the article which costs him Rs 360 as  
(a) Rs 500 (b) Rs 450 (c) Rs 460 (d) Rs 486
- 6) Suppose a certain sum doubles in 2 yr at  $r\%$  rate of simple interest per annum or at  $R\%$  rate of interest per annum compounded annually, we have  
(a)  $r$  (b)  $R < r$  (c)  $R = r$  (d) Cannot be terminated
- 7) The buying price of 5 kg guava, at the rate Rs 20 per kg with 5% sales tax on the purchase, is  
(a) Rs 22 (b) Rs 23 (c) Rs 24 (d) None of these
- 8) Avinash bought an electric iron for Rs 900 and sold it at a gain of 10%. He sold another electric iron at 5% loss which was bought for Rs 1200. On the transaction, he has a  
(a) profit of Rs 75 (b) loss of Rs 75 (c) profit of Rs 30 (d) Loss of Rs 30
- 9) Radhika bought a car for Rs 250000. Next year, its price decreased by 10% and further next year it decreased by 12%. In the two years, overall decrease per cent in the price of the car is  
(a) 3.2% (b) 22% (c) 20.8% (d) 8%
- 10) A sum is taken for 2 yr at 16% per annum, If interest is compounded after every three months, the number of times for which interest is charged in 2 yr is  
(a) 8 (b) 4 (c) 6 (d) 9
- 11) On which of the following profit percent or loss percent is calculated?  
(a) s. p (b) c.p (c) marked price (d) none of these
- 12) The discount is always calculated on which of the following?  
(a) s. p (b) c.p (c) marked price (d) none of these.

- 13) VAT is always calculated on which of the following?  
 (a) s. p (b) c.p (c) marked price (d) none of these
- 14) If interest is compounded half yearly then time period is taken:  
 (a) twice as much as the number of given years  
 (b) half as much as the number of given years (c) same as the number of given years  
 (d) none of these
- 15) If the interest is compounded quarterly, then the 'rate of interest per annum':  
 (a) reduced to half (b) reduced to one-fourth (c) is doubled (d) becomes four times.
- 16) If the marked price of an item is Rs 10 and a discount of 10 % is allowed then its sales price is:  
 (a) Rs 10 (b) Rs 9 (c) Rs11 (d) none of these
- 17) A machinery worth Rs p is depreciated by R % per annum. Which of the following will be its value after 1 year?  
 (a)  $P[1 - \frac{R}{100}]$  (b)  $P[1 + \frac{R}{100}]$  (c)  $P[(1 + \frac{R}{100}) - 1]$  (d)  $P[1 - (1 - \frac{R}{100})]$
- 18) If the marked price of an item is Rs 1050 and sales price is Rs 1000 then discount is:  
 (a) 5% (b)  $4\frac{16}{21}\%$  (c)  $5\frac{5}{19}\%$  (d) none of these.
- 19) An article marked at 10% more than its cost price. If a discount of 10% is allowed then which of the following is true?  
 (a) 1% gain (b) 1% loss (c) no gain and no loss (d) 1.1% loss
- 20) If an article sold for Rs 100 then there is a gain of Rs 20. which of the following is the gain percent?  
 (a) 25% (b) 22% (c) 20% (d)  $16\frac{2}{3}\%$
- 21) If the interest is compounded quarterly. the time period becomes:  
 (a) half the annual rate (b) one-fourth of the annual rate (c) twice the annual rate  
 (d) four times the annual rate
- 22) If the conversion period is not specified. then it is taken as:  
 (a) one year (b) half yearly (c) quarterly (d) none of these
- 23) An article is sold for Rs 100 with a gain of Rs 20. Its gain per cent is:  
 (a) 20% (b) 25% (c) 22% (d)  $16\frac{2}{3}\%$
- 24) An article is marked for Rs 100 and a discount of 10% is allowed. Its selling price is:  
 (a) Rs 100 (b) Rs 110 (c) Rs 90 (d) none of these
- 25) The ratio of 50 paise to Re. 1 is  
 (a) 1:2 (b) 2:1 (c) 1:1 (d) 1:5
- 26) The ratio of 10 m to 1 km is  
 (a) 1:10 (b) 10:1 (c) 1:100 (d) 100:1
- 27) The ratio of 10 km per hour to 30 km per hour is  
 (a) 3:1 (b) 1:2 (c) 1:3 (d) 2:1

- 28) The ratio 1 : 4 converted to percentage is  
(a) 50% (b) 25% (c) 75% (d) 4%
- 29) The ratio 4 : 25 converted to percentage is  
(a) 8% (b) 4% (c) 16% (d) 25%
- 30) The fraction  $\frac{1}{8}$  converted to percentage  
(a)  $12\frac{1}{2}\%$  (b) 25% (c) 8% (d) 16%
- 31) Out of 40 students in a class, 25% passed. How many students passed?  
(a) 20 (b) 10 (c) 30 (d) 40
- 32) Out of 100 students of a class, 30% like to watch T.V. How many students like to watch T.V. ?  
(a) 70 (b) 50 (c) 60 (d) 30
- 33) There are 50 students in a class of which 40 are boys and the rest are girls. The ratio of the number of boys and number of girls is  
(a) 2:3 (b) 1:5 (c) 4:1 (d) 2:5
- 34) The fraction  $\frac{2}{5}$  converted to percentage is  
(a) 20% (b) 30% (c) 40% (d) 50%
- 35) 40% of 50 students of a class are good at Science. How many students are not good at Science?  
(a) 20 (b) 30 (c) 10 (d) 40
- 36) Apala has Rs. 200 with her. She spent 80% amount she had. How much money is left with her?  
(a) Rs.10 (b) Rs.20 (c) Rs.30 (d) Rs.40
- 37) The marked price of a book is Rs. 100. The shopkeeper gives 25% discount on it. What is the sale price of the book?  
(a) Rs.100 (b) Rs.25 (c) Rs.125 (d) Rs.75
- 38) A bag is available for Rs. 90. The shopkeeper allows 10% discount on the marked price. What is the marked price of the bag?  
(a) Rs.100 (b) Rs.90 (c) Rs.110 (d) Rs.10
- 39) A toy marked at Rs. 40 is available for Rs. 32. What per cent discount is given on the marked price?  
(a) 10% (b) 20% (c) 25% (d) 40%
- 40) Meenu purchased a fridge for Rs. 10000 and sold it for Rs. 8000. Find her loss.  
(a) Rs.8000 (b) Rs.10000 (c) Rs.2000 (d) Rs.12000
- 41) Saroj purchased a fan for Rs. 1000 and sold it for Rs. 1200. What is her profit?  
(a) Rs.1000 (b) Rs.1200 (c) Rs.200 (d) Rs.800
- 42) Vimla purchased a watch for Rs. 500. She sold it at a loss of 20%. Find the selling price.  
(a) Rs.500 (b) Rs.400 (c) Rs.300 (d) Rs.200

- 43) Kanti purchased a sewing machine for Rs.2000. She sold it at a loss of 40%. Find the selling price.  
 (a) Rs.1200 (b) Rs.400 (c) Rs.800 (d) Rs.2800
- 44) Mithlesh purchased a T.V. for Rs.10000 and sold it for Rs.8000. Find her loss %.  
 (a) 10% (b) 20% (c) 40% (d) 60%
- 45) Sapna purchased a cycle for Rs. 1000 and sold it for Rs. 1200. Find her gain%.  
 (a) 20% (b) 10% (c) 40% (d) 12%
- 46) Find the simple interest on Rs. 1000 for 2 years at 8% per annum.  
 (a) Rs.80 (b) Rs.40 (c) Rs.120 (d) Rs.160
- 47) A sofa-set was bought for Rs.10000. Its value depreciated at the rate of 10%per annum. Find its value after one year.  
 (a) Rs.11000 (b) Rs.9000 (c) Rs.10000 (d) Rs.1000
- 48) There are 1275 trees in Chaudhary Farm. Out of these 36% trees are of fruits. How many trees of fruits are there in Chaudhary Farm?  
 (a) 459 (b) 549 (c) 945 (d) 954
- 49) The quantity of protein in a particular variety of pulse is 25%. Find the amount of protein in 4 kg of pulse.  
 (a) 1kg (b) 2kg (c) 3kg (d) 4kg
- 50) In a mixture the amount of zinc is 45%. Find the amount of zinc in 400 g mixture.  
 (a) 60g (b) 120g (c) 180g (d) 200g
- 51) In a school out of 340 students, 55% students are of Science. The remaining students are of Commerce. Find the number of students of Commerce.  
 (a) 135 (b) 153 (c) 315 (d) 140
- 52) The salary of Manish is Rs.10000. His salary gets increased by 10%. Find his increased salary.  
 (a) Rs.9000 (b) Rs.11000 (c) Rs.8000 (d) Rs.12000
- 53) A shopkeeper purchased 2 refrigerators for Rs.9800 and Rs.8200 respectively. He sold them for Rs.16920. Find loss%.  
 (a) 2% (b) 4% (c) 5% (d) 6%
- 54) In selling a plot of land for Rs. 61200, a profit of 20% is made. The cost price of the plot is  
 (a) Rs.51000 (b) Rs.50000 (c) Rs.49000 (d) Rs.52000
- 55) The simple interest on Rs.2000 for 4 years is Rs.400. The rate per cent of interest is  
 (a)  $\frac{2000 \times 100}{400 \times 4}$  (b)  $\frac{400 \times 4}{2000 \times 10}$  (c)  $\frac{400 \times 100}{2000 \times 4}$  (d)  $\frac{2000 \times 4}{400 \times 100}$
- 56) The simple interest of Rs. 500 at the rate I of 5% is Rs.100. This interest is of the time.  
 (a) 1 year (b) 4 years (c) 10 years (d) 20 years
- 57) The S.I. of Rs. 100 of 1 year at the rate of 3 paise per rupee per month is  
 (a) Rs.30 (b) Rs.36 (c) Rs.24 (d) Rs.48

- 58) \_\_\_\_\_ is a reduction on the marked price of the article.
- 59) \_\_\_\_\_ = Discount % of marked price
- 60) The marked price of an article when it is sold for Rs 880 after a discount of 12% is \_\_\_\_\_
- 61) 3500 is greater than 500 by \_\_\_\_\_ %
- 62) Ten times a number is \_\_\_\_\_ % increase in the number.
- 63) The loss per cent on selling 140 geometry boxes at the loss .of SP of 10 geometry boxes is equal to \_\_\_\_\_
- 64) The original price of a washing machine which was bought for Rs 13500 inclusive of 8% VAT is \_\_\_\_\_
- 65) If the discount of Rs 5y is available on the marked price of Rs 3x, then the discount per cent is \_\_\_\_\_
- 66) Selling price of 9 articles is equal to the cost price of 15 articles. In this case, profit is \_\_\_\_\_
- 10 x 1 = 10
- 67) To calculate the growth of bacteria, if the rate of growth is known. The formula for calculation of amount in compound interest can be used.
- (a) False (b) True
- 68)  $CP = MP - \text{Discount}$
- (a) True (b) False
- 69) A man purchased a toy for Rs 1040 and sold it for Rs 800. His loss per cent is 30%.
- (a) True (b) False
- 70) The compound interest on a sum of Rs P for T years at R% per annum compounded annually is given by the formula  $P(1 + \frac{R}{100})^n$
- (a) True (b) False
- 71) Number of students apperaring for Class X CSSE examination increased from 91422 in 2003-04 to 116054 in 2012-13. Increase in the nu'mber of students appeared is approximately 27%.
- (a) False (b) True
- 72) The cost price of 10 tables is equal to the sale price of 5 tables. Then, profit per cent is 100%.
- (a) True (b) False
- 73) 40% of [100 - 20% of 300] is equal to 64.
- (a) True (b) False
- 74) The sale price is regular price minus the discount.
- (a) False (b) True
- 75) If for the principal P, rate R% and time T,the simple interest is SI and compound interest is CI. Then,  $CI > SI$ .
- (a) False (b) True
- 76) The compound interest on Rs 50000 at4% per annum for 2 yr compounded annually is Rs 4080.
- (a) False (b) True

- 77) The time period after which the interest /s added each time to form a new principal is called the \_\_\_\_\_ (1) Marked price
- 78) The discount per cent is calculated on the x of an article. Here, x refers to. \_\_\_\_\_ (2) Accrued interest
- 79) The amount due is equal to the principal plus the \_\_\_\_\_ (3) Compound interest
- 80) The amount of money that is earning interest or that you are borrowing is called the \_\_\_\_\_ (4) Principal
- 81) y is the interest calculated on the previous year's amount. Here, y refers to \_\_\_\_\_ (5) Twice
- 82) VAT is calculated on \_\_\_\_\_ (6) Half
- 83) Discount is always counted on the \_\_\_\_\_ (7) Conversion period
- 84) Profit or loss is always calculated on \_\_\_\_\_ (8) marked price
- 85) If the interest compounded half yearly the time period becomes \_\_\_\_\_ (9) Selling price
- 86) If the interest compounded half yearly the rate of interest becomes \_\_\_\_\_ (10) Cost price

$$4 \times 1 = 4$$

- 87) The overhead charges are added to CP or S.P
- 88) The formula for calculating the compound interest is  $P[1 - \frac{R}{100}]^n$  or  $P[1 + \frac{R}{100}]^n$ ?
- 89) Customers pay VAT to the shopkeeper in addition to selling price. Is the VAT a part of profit?
- 90) A shopkeeper purchased an item for Rs 100 and spent Rs 15 on its transportation. The actual cost price of the item for the shopkeeper is Rs 85 or Rs 115?

$$54 \times 2 = 108$$

- 91) Convert the following ratios to percentages. 3:4
- 92) Convert the following ratios to percentages. 2:3
- 93) 72% of 25 students are good in Mathematics. How many students are not good in Mathematics?
- 94) 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?
- 95) Find the time period and rate for each a sum taken for  $1\frac{1}{2}$ yr at 8% per annum is compounded half-yearly.
- 96) A sum is taken for one year at 16% per annum. If interest is compounded after every three months, how many times will interest be charged in one year?
- 97) An item marked at Rs 840 is sold for Rs 714. What is the discount and discount %?
- 98) The list price of a frock is Rs 220. A discount of 20% is announced on it. What is the amount of discount on it and its sale price?
- 99) A picnic is being planned in a school for 20 Class VIII girls which are 40% of the total number of students. Find the ratio of girls to the number of boys in the class.
- 100) Convert the following ratios to percentages. 7:3
- 101) Convert the following ratios to percentages. 5:4
- 102) After spending 20% of the salary, Aakash has Rs 20000 in his hand. Find the amount of his salary.
- 103) If 30% of x is 450, then find the value of x.
- 104) Find the discount in per cent, when MP = Rs 625 and SP =Rs 562.50
- 105) Find the discount in per cent, when MP = Rs 900 and SP = Rs 873

- 106) The marked price of an article is Rs 500. The shopkeeper gives a discount of 5% and still makes a profit of 25%. Find the cost price of article.
- 107) Prachi bought medicines from a medical store as pre-scribed by her doctor for Rs 36.40 including 4% VAT. Find the price before VAT was added.
- 108) Find the time period and rate for which a sum taken for  $2\frac{1}{2}$ yr at 6% per annum is compounded half-yearly.
- 109) Find the time period and rate for which a sum taken for 3 yr at 6% per annum is compounded half-yearly.
- 110) Find the population of a city after 3 yr, which is at present 12lakh, if the rate of increase is 3%.
- 111) Find the time period and rate for each a sum taken for 2 yr at 4% per annum compounded half-yearly.
- 112) Given, P = Rs 40000 and R = 8% per annum compounded annually. Find the interest, if period is 1 yr.
- 113) Given, P = Rs 40000 and R = 8% per annum compounded annually. Find the principal for 2nd year
- 114) Given, P = Rs 40000 and R = 8% per annum compounded annually. Find the interest for 2nd year.
- 115) Given, P = Rs 40000 and R = 8% per annum compounded annually. Find the amount, if period is 2 yr.
- 116) If Rs 1600 lent at a CI of 5% per annum, then compounded half-yearly for 1 yr will amount to ...
- 117) Shivam invests Rs 93750 at 9.6% per annum for 3 yr and the interest is compounded annually, calculate the amount standing to his credit at the end of second year.
- 118) Shivam invests Rs 93750 at 9.6% per annum for 3 yr and the interest is compounded annually, calculate the interest for the third year.
- 119) If  $\frac{7}{3}$  % of a number is 147, then find the number.
- 120) Ankit buys a memory card costing Rs 550. If the rate of sales tax is 5%, then find the total amount payable by him.
- 121) After increasing 15% of the price of an article, its price is Rs 1725. Find the increased amount.
- 122) By selling an article for Rs 112000, a girl gains 40%. Find the cost price of the article.
- 123) Navin purchased a cell phone for Rs 12000 and sold it for Rs 8000. Find his loss per cent.
- 124) By how much per cent 2800 is greater than 2400?
- 125) Using the formula  $SP = \frac{(100 + \text{gain}\%) \times CP}{100}$  find the SP of an article, whose CP is Rs 20000, when gain is 20%.
- 126) Using the formula  $CP = \frac{SP \times 100}{(100 - \text{Loss}\%)}$  find the CP of an article whose SP is Rs 10000, when loss is 20%.
- 127) Using the formula,  $A = (1 + \frac{R}{100})^n$  calculate the amount and the compound interest for the following. P = Rs 500, R = 12% and n = 2yr
- 128) If P = Rs 1000, R = 10% and n = 2yr, then calculate compound interest.
- 129) If marked price of an article is Rs 1200 and the discount is 12%, then find the selling price of the article.

- 130) Ankesh took a loan of Rs 100000 at 12% per annum compounded half-yearly. He paid Rs 112360. If  $(1.06)^2$  is equal to 1.1236, then find the period for which he took loan.
- 131) A TV set was bought for Rs 26250 including 5% VAT. Then find the original price of the TV set
- 132) In the first year, on an investment of Rs 600000, the loss is 5% and in the second year the gain is 10%. Find the net gain or loss.
- 133) Anirudha bought 100 pencils at the rate of Rs 3.50 per pencil and pays a sales tax of 4%. Find the total amount paid by Anirudha.
- 134) A shirt is marked at Rs 850 and is sold for Rs 765. What is the discount and discount percent?
- 135) The cost of a calculator is Rs 750. The sales tax is charged 5%. Find the bill amount.
- 136) A computer monitor is marked at Rs 15600 and it is available for Rs 12480. Find the discount given and discount percent.
- 137) What is the percentage of 5 oranges out of 25 fruits?
- 138) A picnic is being planned in a school for class VIII. Girls are 60% of the total number of students and are 18 in number.  
What is the total strength of the class?
- 139) A picnic is being planned in a school for class VIII. Girls are 60% of the total number of students and are 18 in number.  
What is the ratio of the number of boys to the number of girls?
- 140) A picnic is being planned in a school for class VIII. Girls are 60% of the total number of students and are 18 in number.  
If the picnic spot is 55 km from the school and their first stop is at 22 km from the school, what per cent of the total distance is this?
- 141) Rahul got 150 marks out of 200 and Prabha got 180 marks out of 300. Whose performance is better?
- 142) Find the whole quantity if 5% of the quantity is 80.
- 143) 18% of a class took part in a karate competition. If 18 students have taken part in it, then what is the total number of students in the class?
- 144) Shankar bought a second hand refrigerator for Rs 2500. He spent Rs 500 on its repairs and sold for Rs 3300. Find his loss or gain per cent.
- $111 \times 3 = 333$
- 145) A shop gives 20% discount. What would the sale price of each of these be a dress marked at Rs 120?
- 146) A shop gives 20% discount. What would the sale price of each of these be a pair of shoes marked at Rs 750?
- 147) A shop gives 20% discount. What would the sale price of each of these be a bag marked at Rs 250?
- 148) A table marked at Rs 15000 is available for Rs 14400. Find the discount given and the discount per cent.
- 149) An almirah is sold at Rs 5225 after allowing a discount of 5%. Find its marked price.
- 150) Find Selling Price (SP), if a profit of 5% is made on a cycle of Rs 700 with Rs 50 as overhead charges.
- 151) 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.
- 152) 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.
- 153) Two times a number is a 100% increase in the number. If we take half the number, what would be the decrease in per cent?



- 154) A man got a 10% increase in his salary. If his new salary is Rs 154000, find his original salary.
- 155) 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?
- 156) A shopkeeper buys 80 articles for Rs2400 and sells them for a profit of 16%. Find the selling price of one article.
- 157) The cost of an article was Rs15500. Rs 450 were spent on its repairs. If it is sold for a profit of 15%, find the selling price of the article.
- 158) 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?
- 159) The price of a TV is Rs 13000. 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.
- 160) Arun bought a pair of skates at a sale, where the discount given was 20%. If the amount he pays is Rs 1600, find the marked price.
- 161) I purchased a hair-dryer for Rs 5400 including 8% VAT. Find the price before VAT was added.
- 162) Find interest and amount to be paid on Rs 15000 at 5% per annum after 2 year.
- 163) Find the amount to be paid at the end at 2 year on Rs 2400 at 5% per annum compounded annually.
- 164) Find the amount to be paid at the end at 1 year on Rs 1800 at 8% per annum compounded quarterly.
- 165) A machinery worth Rs10500 depreciated by 5%. Find its value after one year.
- 166) Find the population of a city after 2 year which is at present 12 lakh, if the rate of increase is 4%.
- 167) Vasudevan invested Rs 60000 at an interest rate of 12% per annum compounded half-yearly. What amount would he get after 6 months?
- 168) Vasudevan invested Rs 60000 at an interest rate of 12% per annum compounded half-yearly. What amount would he get after 1 year?
- 169) Arif took a loan of Rs 80000 from a bank. If the rate of interest is 10% per annum, find the difference in amounts he would be paying after  $1\frac{1}{2}$  year, if the interest is compounded annually.
- 170) Arif took a loan of Rs 80000 from a bank. If the rate of interest is 10% per annum, find the difference in amounts he would be paying after  $1\frac{1}{2}$  year, if the interest is compounded half-yearly.
- 171) 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 compounded half-yearly.
- 172) 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 h, if the count was initially 506000.
- 173) Maria invested Rs 8000 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.
- 174) Maria invested Rs 8000 in a business. She would be paid interest at 5% per annum compounded annually. Find the interest for the 3rd year.
- 175) The population of a place increased to 54000 in 2003 at a rate of 5% per annum. Find the population in 2001.

- 176) The population of a place increased to 54000 in 2003 at a rate of 5% per annum. What would be its population in 2005?
- 177) A scooter was bought at Rs 42000. Its value depreciated at the rate of 8% per annum. Find its value after one year.
- 178) A shopkeeper purchased 200 bulbs for Rs 10 each. However 5 bulbs were fused and had to be thrown away. The remaining were sold at Rs 12 each. Find the gain or loss percent.
- 179) Meenu bought two fans for Rs 1200 each. She sold one at a loss of 5% and the other at a profit of 10%. Find the selling price of each. Also find out the total profit or loss.
- 180) The cost of a pair of roller skates at a shop was Rs 450. The sales tax charged was 5%. Find the bill amount.
- 181) A sum of Rs 10,000 is borrowed at a rate of interest 15% p.a. for 2 years. Find the simple interest on this sum and the amount to be paid at the end of 2 years.
- 182) What amount is to be repaid on a loan of Rs 12000 for  $1\frac{1}{2}$  years at 10% per annum compounded half yearly
- 183) Find compound interest paid when a sum of Rs 10,000 is invested for 1 year and 3 months at  $8\frac{1}{2}\%$  per annum compounded annually.
- 184) The population of a city was 20,000 in 1997. It increased at the rate of 5% per annum. Find the population at the end of the year 2000.
- 185) A TV was bought at a price of Rs 21,000. After one year the value of the TV was depreciated by 5%. Find the value of the TV after 1 year.
- 186) The price of a scooter was RS. 34,000 last year. It has increased by 20% this year. What is the price now?
- 187) Sohan bought a second hand refrigerator for RS.2,500, then spent RS. 500 on its repairs and sold it for RS. 3,300. Find his loss or gain per cent
- 188) Waheeda bought an air cooler for RS. 3300 including a tax of 10%. Find the price of the air cooler before VAT was added.
- 189) Salim bought an article for Rs. 784 which included GST of 12% . What is the price of the article before GST was added?
- 190) An article was purchased for RS. 1239 including GST of 18%. Find the price of the article before GST was added?
- 191) Find CI on RS.12600 for 2 years at 10% per annum compounded annually.
- 192) What per cent of 500 is 35?
- 193) If the price of an article, which is Rs 1000, is reduced by 7%, then find the new price.
- 194) If 25% of x is 150, then find the value of x.
- 195) The price of an article was Rs 68000. If its price is increased by 20%, then find the new price of that article.
- 196) The price of a fan is Rs 1200. If the price of fan is decreased by 15%, then find the new price.
- 197) A shop gives 10% discount. What would be the sale price of each of these a jeans marked at Rs 150?
- 198) A shop gives 10%discount. What would be the sale price of each of these a pair of shoes marked at Rs 650?
- 199) Your bill in a shop is Rs 577.80. Try estimating 15% discount of the same bill amount.
- 200) Find selling price, if a profit of Rs 5 is made on a hair dryer Rs 500 with Rs 50 as overhead charges.

- 201) Find selling price, if a profit of Rs 5 is made on an iron bought for Rs 560 and expenses of Rs 80 made on repairing.
- 202) The price of an article was Rs 68000. If its price is increased by 20%, then find the new price of that article.
- 203) The price of a fan is Rs 1200. If the price of fan is decreased by 15%, then find the new price.
- 204) A shop gives 10% discount. What would be the sale price of each of these a jeans marked at Rs 150?
- 205) A shop gives 10% discount. What would be the sale price of each of these a pair of shoes marked at Rs 650?
- 206) Your bill in a shop is Rs 577.80. Tly estimating 15% discount of the same bill amount.
- 207) Find selling price, if a profit of Rs 5 is made on a hair dryer Rs 500 with Rs 50 as overhead charges.
- 208) Find selling price, if a profit of Rs 5 is made on a iron bought for Rs 560 and expenses of Rs 80 made on repairing.
- 209) A shopkeeper bought two washing machine sets at Rs 15000 each. He sold one at a profit of 15% and the other at a loss of 15%. Find whether he made an overall profit or loss.
- 210) Rahul bought an air cooler for Rs 3300 including a tax of 10%. Find the price of the air cooler before VAT was added.
- 211) Find the buying price of the following, when 5% sale tax is added on the purchase of a towel at Rs 50.
- 212) Find the buying price of the following, when 5% sale tax is added on the purchase of two bars of soap at Rs 35 each.
- 213) Find the buying price of the following, when 5% sale tax is added on the purchase of 5 kg of flour at Rs 15 per kg.
- 214) If 8% VAT is included in the prices, find the original price of a TV bought for Rs 13500.
- 215) If 8% VAT is included in the prices, find the original price of a shampoo bottle bought for Rs 180.
- 216) Kritika ordered one pizza and one garlic bread from a pizza store and paid Rs 387 inclusive of taxes of Rs 43. Find the tax%.
- 217) Rahul's salary is increased by 15% and then decreased by 15%. Find the net percentage change in his salary.
- 218) Sumit's income is 30% more than that of Pratik. How much per cent is Pratik's income less than that of Sumit's income?
- 219) In how much time would the simple interest on a certain sum be 0.5 times of principal at 8% per annum?
- 220) If simple interest for 5 yr be equal to 40% of the principal, then in how much time it will be equal to the principal?
- 221) Find the compound interest on Rs 5000 in 2 yr at 8% per annum, the interest being compounded half-yearly.
- 222) Ramender offers a discount of 20% on all the items at his shop and still makes a profit of 12%. What is the cost price of an article marked at Rs 2800?
- 223) If marked price of an article is Rs 800 and it is sold at Rs 760, then find the discount rate.
- 224) Ranjana bought a product for Rs 3155 including 4.5% sales tax. Find the price before tax was added.

225) The table shows the cost of sunscreen of two brands with and without sales tax:

		<b>COST (IN RS)</b>	<b>COST+TAX(IN RS)</b>
1	X(100 g)	70	75
2	Y(100 g)	62	65

Which brand has a greater sales tax rate? Give the sales tax rate of each brand.

226) Madhu's room measures 6 m x 3 m. Her carpet covers 8 m<sup>2</sup>. What per cent of floor is covered by the carpet?

227) Ayesha announced a festival discount of 25% on all the items in her mobile phone shop. Ramandeep bought a mobile phone for himself. He got a discount of Rs 1960. What was the marked price of the mobile phone?

228) Babita bought 160 kg of mangoes at Rs 48 per kg. She sold 70% of the mangoes at Rs 70 per kg and the remaining mangoes at Rs 40 per kg. Find Babita's gain or loss per cent on the whole dealing.

229) Lemons were bought at Rs 48 per dozen and sold at the rate of Rs 48 per 10. Find the gain or loss per cent.

230) Find the compound interest on Rs 48000 for one year at 8% per annum, when compounded half-yearly.

231) Find the difference between compound interest and simple interest on Rs 45000 at 12% per annum for 3 yr.

232) In a public school, 70% of the student population are boys. If there are 120 girls, then find the total enrollment of the school.

233) A student used the proportion  $\frac{n}{100} = \frac{5}{32}$  to find 5% of 32. What did the student do wrong?

234) In the year 2001 , the number of malaria patients admitted in the hospitals of a state was 4375. Every year this number decreases by 8%. Find the number of patients in 2003.

235) Ranjit works in a multinational company as a senior executive with annual package of 12 lakh. He pays income tax regularly and donates 5% of his annual earning to an orphanage.

What amount of money he donate?

236) Ranjit works in a multinational company as a senior executive with annual package of 12lakh. He pays income tax regularly and donates 5% of his annual earning to an orphanage.

What are the values depicted by Ranjit here?

237) A jacket worth Rs 5400 is offered for sale at Rs 4500. What per cent discount is offered during the sale?

238) Brinda purchased 18 coats at the rate of Rs1500 each and sold them at a profit of 6%. If customer is to pay sales tax at the rate of 4%, then how much will one coat cost to the customer and what will be the total profit earned by Brinda after selling all coats?

239) A real estate agent receives Rs 50000 as commission, which is 4% of the selling price? At what price, does the agent sell the property?

240) Rahim borrowed Rs 1024000 from a bank for 1 yr. If the bank charges interest at 5% per annum, compounded half-yearly, then what amount will he have to pay after the given time period? Also, find the interest paid by him.

241) Find the SP, if marked price =Rs 5450 and discount = 5%

242) Find the SP, if marked price = Rs 1300 and discount = 1.5%

243) If 35% of x is 70, then find the value of x.

244) The length of rope A is 40% of the length of rope B which is 5 m long. Find the 5 cm length of two ropes?

245) Express the following as a percentage.  $3\frac{2}{15}$

246) Express the following as a percentage. 0.0243

247) Sarla purchased a second hand washing machine for Rs 5000 and spent Rs 400 on its repairs. She sold it for Rs 6300. Find here loss or profit percent.

248) Rahul bought a TV for Rs 89,600 including a tax of 12%. Find the cost of the TV before VAT was added.

249) A car was purchased for Rs 2,10,000. After 2 years the value of the car depreciated by 5%. Find the value of the car after two year.

Note: Depreciation means reduction of value due to use and age of the item.

250) Find the population of a city after 2 years, which is at present is 20 lakh, if the rate of increase is 5% p.a.

251) **Complete the following crossword puzzle using the given direction.**

**Direction:**

**Across:**

(1) \_\_\_\_\_ is always calculated on the marked price.

(2)  $InP[1 + \frac{R}{100}]^n$  r stands for \_\_\_\_\_

(3) Cost price + profit gives \_\_\_\_\_

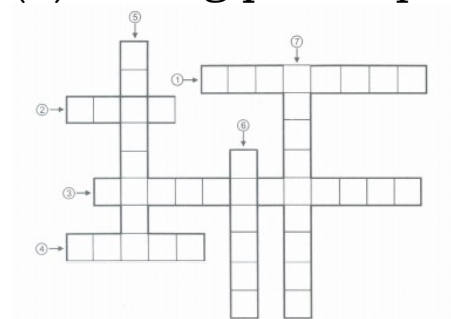
(4) Comparison of two quantities by division is called \_\_\_\_\_

**Down**

(5) The principal + \_\_\_\_\_ gives amount.

(6) Rate of interest is usually specified as r % \_\_\_\_\_

(7) Selling price - profit gives \_\_\_\_\_



252) A sum of Rs 20,000 is borrowed by Reema for two years at an interest of 8% compounded annually. Find the compound interest (CI) and the amount she has to pay at the end of 2 years.

253) Find compound interest on Rs 12600 for 2 years at 10% p.a. compounded annually.

254) Try estimating 20% of the same bill amount.

255) Try finding 15% of Rs.375.

$$53 \times 5 = 265$$

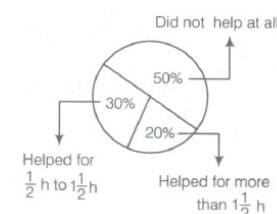
256) In a primary school, the parents were asked about the number of hours, they spend per day in helping their children to do homework. There were 90 parents, who helped for  $\frac{1}{2}$ h to  $\frac{1}{2}$ h. The distribution of parents according to the time for which, they said they helped is given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

Using this, answer the following:

(i) How many parents were surveyed?

(ii) How many said that they did not help?

(iii) How many said that they helped for more than  $1\frac{1}{2}$ h?



257) Find the ratio of the following.

- (a) Speed of a cycle 15 km/h to the speed of scooter 30km/h
- (b) 5m to 10 km
- (c) 50 paise to Rs.5

258) If Chameli had Rs 600 left after spending 75% of her money, how much did she have in the beginning?

259) 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 games.

260) A shopkeeper bought two TV sets at Rs 10000 each. He sold one at a profit 10% and the other at a loss of 10%. Find whether he made an overall profit or loss.

261) By what per cent is Rs 2000 less than Rs 2400? Is it the same as the per cent by which Rs 2400 is more than Rs 2000?

262) A VCR and TV were bought for Rs 8000 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.

263) A milkman sold two of his buffaloes for Rs 20000 each. On one, he made a gain of 5% and on the other, a loss of 10%. Find his overall gain or loss. [**Hint** Find CP of each]

264) Find CI on a sum of Rs 8000 for 2 yr at 5% per annum compounded annually.

265) Calculate the amount and compound interest on Rs 10800 for 3 yr at  $12\frac{1}{2}\%$  per annum compounded annually.

266) Calculate the amount and compound interest on Rs 18000 for  $2\frac{1}{2}$  yr at 10% per annum compounded annually.

267) Calculate the amount and compound interest on Rs 62500 for  $1\frac{1}{2}$  yr at 8% per annum compounded half-yearly.

268) Calculate the amount and compound interest on Rs 8000 for 1 yr at 9% per annum compounded half-yearly. (You could use the year by year calculation using SI formula to verify.)

269) Calculate the amount and compound interest on Rs 10000 for 1 yr at 8% per annum compounded half-yearly.

270) Kamala borrowed Rs 26400 from a bank to buy a scooter at a rate of 15% per annum compounded yearly. What amount will she pay at the end of 2 years and 4 months to clear the loan?

271) Fabina borrows Rs 12500 at 12% per annum for 3 yr 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?

272) I borrowed Rs 12000 from Janashree at 6% per annum simple interest for 2 yr. Had I borrowed this sum at 6% per annum compound interest, what extra amount would I have to pay?

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

274) If 40% of the students are girls and the number of boy students is 600, then find the number of girl students.

275) Raghav paid 10% of his salary as income tax. If he has left Rs 32000, after paying income tax, then find his salary.

276) A political party won 25 seats out of the total number of seats it contested. If their win percentage was 60% approx, then how many seats did the party contest in all?



- 277) An employee saves 30% of his monthly income. After 4 months, he finds that he has Rs 12000 as his savings. Find his monthly income.
- 278) Ranjan purchased an old bike for Rs 10000. He spent Rs 5000 on its repair and sold it at a profit of 10%. Find his selling price.
- 279) If the cost price of 11 articles is equal to the selling price 10 articles, find the gain per cent.
- 280) A shopkeeper in order to clear his old stock of shoes, 30% discount to their customer at each pair of shoes. If marked price of a pair of shoes is Rs 4000, then find the selling price of a pair of shoes.
- 281) Find the rate of discount being given on a laptop, whose selling price is Rs 30000 after deducting a discount of Rs 4050 on its marked price.
- 282) Find the difference between the simple interest and the compound interest on Rs 8000 at 10% per annum for 3yr.
- 283) Find the sum on which the compound interest for 2 yr at 10% per annum is Rs 154.
- 284) The population of a city 1 yr ago was 55500. Due to an epidemic, it decreases every year at the rate of 5% per annum. Find its present population.
- 285) The price of a commodity worth Rs 2500 depreciated by 7%. Find its value after 1 yr.
- 286) Living on your own, Sanjay is looking for one bedroom apartment on rent. At Neelgiri apartments, rent for the first two months is 20% off. The one bedroom rate at Neelgiri is Rs 6000 per month. At Savana apartments, the first month is 50% off. The one bedroom rate at Savana apartments is Rs 7000 per month. Which apartment will be cheaper for the first two months and by how much?
- 287) In 2007-08, the number of students appeared for Class X examination was 105332 and in 2008-09, the number was 116054. If 88151 students pass the examination in 2007-08 and 103804 students in 2008-09. What is the increase or decrease in pass% in Class X result?
- 288) Due to the effect of special campaign about 'saving water by state GAL BOARD. Findly an average urban Indian uses about 150 L of water every day which is reduced to 10%. The consumption of daily use of water given below:

Activities	Litres per person per day
Drinking	3
Cooking	4
Bathing	20
Sanitation	40
Washing clothes	40
Washing utensils	20
Gardening	23
Total	150

- (a) What per cent of water is used for bathing and sanitation together per day?
- (b) How much less per cent of water is used cooking in comparison to that used for bathing?
- (c) What per cent of water is used for drinking cooking and gardening together?
- (d) What value is depicted from the 'saving water'?
- 289) Rahim borrowed Rs 1024000 from a bank for 1yr. If the bank Charges interest of 5% per annum, compounded half-yearly. Then, what amount will he have to pay after the given time period. Also, find the interest paid by him.

- 290) Sunscreens block harmful Ultraviolet (UV) rays produced by the Sun. Each sunscreen has a Sun Protection Factor (SPF) that tells you how many minutes you can stay in the sun before you receive one min of burning UV rays. For example, if you apply sunscreen with SPF 15, you get 1 min of UV rays for every 15 min you stay in the Sun.
- A sunscreen with SPF 15 allows only  $\frac{1}{15}$  of the Sun's UV rays. What per cent of UV rays does the sunscreen block?
  - Suppose, a sunscreen allows 25% of the Sun's UV rays.
    - What fraction of UV rays does this sunscreen block? Give your answer in lowest terms,
    - Use your answer from part (a) to calculate this sunscreen's SPF, Explain how you found your answer?
  - A label on a sunscreen with SPF 30 claims that the sunscreen blocks about 97% of harmful UV rays, Assuming the SPF factor is accurate, is this claim true? Explain.
- 291) In Delhi University, in the year 2009-10, 49000 seats were available for admission to various courses at graduation level. Out of these, 28200 seats were for the students of General category, while 7400 seats were reserved for SC and 3700 seats for ST. Find the percentage of seats available for
- students of General category.
  - students of SC and ST categories taken together.
- 292) A rectangle has its length increased by 20% and width decreased by 20%. Find if any, the percentage change in its area.
- 293) A book's price in a book store is Rs 275 with GST. If the GST imposed is 7%, then find the marked price of the book.
- 294) If the CP of 25 pens is equal to the SP of 30 pens, then find the loss per cent if he sells 30 pens.
- 295) At a stock clearance sale, all items are on sale at 45% discount. If I buy a pant marked at Rs 600, then how much money would I need to pay?
- 296) Rohan buys a pendrive for Rs 380. At what price must he mark it, so that after allowing a discount of 5%, he still makes a profit of 25%?
- 297) The value of a property increases every year at the rate of 7%. If its value at the end of 2 yr is Rs 350000, then what was its original value at the beginning of these years?
- 298) A company increased its production of two wheelers from 50000 in 2013 to 65000 in 2014. Find the annual rate of growth of production of two wheelers?
- 299) Convert  $\frac{2}{3}$  as percentage.
- 300) What is 72% of 25?
- 301) A cricket team won 10 matches out of the total number of matches they played. If their winning percentage is 25, then how many matches did they play in all?
- 302) The price of an item was Rs 25000 last year. It has increased by 20% this year. What is the price now?
- 303) A shirt is marked at Rs 1250 and sold for Rs 1125. What is the discount and discount per cent?
- 304) A general store offers 20% discounts on all items. What would be the sale price of an item having its marked price as Rs 1500?
- 305) An item marked at Rs 18000, is available for Rs 16740. Find the discounts given and the discount per cent.
- 306) An item is sold for Rs 5904 after allowing a discount of 18%. Find the marked price.
- 307) By what per cent is Rs 18000 less than Rs 24000? Is it the same as the per cent by which Rs 24000 is more than Rs 18000?
- 308) A man bought a car for Rs 4,20,000. Its value depreciated at the rate of 8% per annum. Find the value of the car after one year.



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