



# MATHS

## BOOKS - RD SHARMA MATHS

### (ENGLISH)

## PROFIT, LOSS, DISCOUNT AND VALUE

### ADDED TAX (VAT)

**Others**

1. A shopkeeper buys a toy for Rs. 250 and sells it for Rs. 285. Find his gain and gain percent.

A. Gain = Rs.25

$$\text{Gain percentage} = 18\%$$

B. Gain = Rs.55

$$\text{Gain percentage} = 24\%$$

C. Gain = Rs.35

$$\text{Gain percentage} = 14\%$$

D. Gain =Rs.25

Gain percentage =14%

**Answer: C**



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2. Rishi bought a wrist watch for Rs 2200 and sold it for Rs 1980. Find his loss and loss percent.

A. LOSS =Rs. 280

$$LOSS \% = 20 \%$$

B. LOSS =Rs. 220

$$LOSS \% = 10 \%$$

C. LOSS =Rs. 360

$$LOSS \% = 30 \%$$

D. LOSS =Rs. 220

$$LOSS \% = 8 \%$$

**Answer: B**



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3. If the cost price of 18 mangoes is the same as the selling price of 16 mangoes, find the gain percent.

A. Gain =Rs. 2

$$\text{Gain \%} = 12.5 \%$$

B. Gain =Rs. 12

$$\text{Gain \%} = 32.5 \%$$

C. Gain =Rs. 8

$$\text{Gain \%} = 15 \%$$

D. Gain =Rs. 7

Gain % = 12.5 %

**Answer: A**



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4. If the C.P. of 25 chairs is equal to the S.P. of 30 chairs, find the loss percent.

A. loss =Rs. 5

loss percent =  $16\frac{2}{3}$  %

B. loss =Rs. 8

$$\text{loss percent} = 17\frac{2}{3} \%$$

C. loss =Rs. 9

$$\text{loss percent} = 16 \%$$

D. loss =Rs. 12

$$\text{loss percent} = 23 \%$$

**Answer: A**



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5. A girl buys lemons at 4 for Rs. 3 and sells them at 5 for Rs 4. How much percent loss or gain does she make?

A. GAIN =Rs. 0.25

$$\text{GAIN \%} = 6.66 \%$$

B. GAIN =Rs. 0.15

$$\text{GAIN \%} = 8.66 \%$$

C. GAIN =Rs. 1.05

$$\text{GAIN \%} = 9.66 \%$$



$$\text{D. GAIN} = \text{Rs. } 0.05$$

$$\text{GAIN \%} = 6.66 \%$$

**Answer: D**



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**6.** A person sells an article for Rs 550, gaining

$\frac{1}{10}$  of its C.P. Find gain percent.

A. 10 %

B. 20 %

C. 15 %

D. 25 %

**Answer: A**



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7. 200 kg of sugar was purchased at the rate of Rs. 15 per kg and sold at a profit of 5 % . Compute the profit and the selling price per kg.

A. 15.75

B. 16.75

C. 17.75

D. 18.75

**Answer: A**



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**8.** A man buys a plot of agricultural land for Rs 3,00,000. He sells one-third at a loss of 20% and two-fifths at a gain of 25%. At

what price must he sell the remaining land so as to make an overall profit of 10%?

A.  $SP = \text{Rs. } 89000$

B.  $SP = \text{Rs. } 80000$

C.  $SP = \text{Rs. } 1,00,000$

D.  $SP = \text{Rs. } 98000$

**Answer: C**



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9. A dishonest dealer professes to sell his goods at cost price, but he uses a weight of 960 grams for 1kg. Find his gain percent.

A. 4.557 %

B. 4.167 %

C. 3167 %

D. 2.567 %

**Answer: B**



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10. A man purchases two fans for Rs. 2160. By selling one fan at a profit of 15% and the other at a loss of 9% he neither gains nor losses in the whole transaction. Find the cost price of each fan.

A. Rs.810, Rs.1350

B. Rs. 920, Rs.135

C. Rs. 913, Rs.130

D. Rs.820, Rs.1350

**Answer: A**



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**11.** A man bought two T.V. sets for Rs 42500. He sold one at a loss of 10% and other at a profit of 10%. If the selling price of each T.V. set is same, determine the C.P. of each set.



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**12.** If a man were to sell his hand-cart for Rs 720, he would lose 25% . What must he sell it

for to gain 25%?



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**13.** A man sold two articles at Rs 25920 each. These were sold at 8% gain and 4% loss respectively. Find the gain or loss percent in the whole transaction.



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**14.** A toy was sold at a gain of 12%. Had it been sold for Rs 33 more, the gain would have been 14% . Find the cost price of the toy?



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**15.** A man bought an article and sold it at a gain of 10%. If he had bought it at 20% less and sold it for Rs 10 more, he would have made a profit of 40%. Find the C.P. of the article?





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**16.** By selling a towel for Rs 126.90, a draper loses 6%. For how much should he sell the towel to gain 4%?



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**17.** A dealer buys 50 chairs for Rs 50,000 but 20 of them are damaged. He decides to sell each damaged one at three fourths the price of the normal one. What should this price be in order

that he may make a profit of 35% on the whole transaction?



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**18.** By selling a stool for Rs 67.50, a carpenter loses 10%. How much percent would he gain or lose by selling it for Rs 82.50?



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**19.** Three items are purchased at Rs 4500 each. One of them is sold at a loss of 10%. At what price should the other two be sold so as to gain 20% on the whole transaction? What is the gain % on these two items?



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**20.** By reducing the selling price of an article by Rs 50, a gain of 5% turns into a loss of 5%. Find the original selling price of the article.





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21. A student buys a pen for Rs 90 and sells it for Rs 100. Find his gain and gain percent.



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22. Rehka bought a saree for Rs 1240 and sold it for Rs 1147. Find her loss or profit percent.



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**23.** A boy buys 9 apples for Rs 9.60 and sells them at 11 for Rs 12. Find his gain or loss percent.



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**24.** The cost price of 10 articles is equal to the selling price of 9 articles. Find the profit percent.



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**25.** A retailer buys a radio for Rs. 225. His overhead expenses are Rs. 15. If he sells the radio for RS. 300, determine his profit percent.



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**26.** A retailer buys a cooler for Rs 1200 and overhead expenses on it are Rs 40. If he sells the cooler for Rs. 1550, determine his profit percent.



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**27.** A dealer buys a wristwatch for Rs 225 and spends Rs 15 on its on its repairs. If he sells the same for Rs 300, find his profit percent.



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**28.** Ramesh bought two boxes for Rs 1300. He sold one box at a profit of 20% and the other box at a loss of 12%. If the selling price of both boxes is the same, find the cost price of each box.





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**29.** If the selling price of 10 pens is equal to cost price of 14 pens, find the gain percent.



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**30.** If the cost price of 18 chairs be equal to selling price of 16 chairs, find the gain or loss percent.



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**31.** If the selling price of 18 oranges is equal to the cost price of 16 oranges, find the loss percent.



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**32.** Ravish sold his motorcycle to Vineet at a loss of 28%. Vineet spent Rs 1680 on its repairs and sold the motor cycle to Rahul for Rs 35910, thereby making a profit of 12.5%, find the cost price of the motor cycle for Ravish.



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**33.** By selling a book for 258, a bookseller gains 20%. For how much should he sell it to gain 30%?



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**34.** A defective briefcase costing Rs 800 is being sold at a loss of 8%. If the price is should be reduced by 5%, find its selling price.



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**35.** By selling 90 ball pens for Rs 160 a person loses 20%. How many ball pens should be sold for Rs 96 so as to have a profit of 20%?



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**36.** A man sells an article at a profit of 25%. If he had bought it at 20% less and sold it for Rs 36.75 less, he would have gained 30%. Find the cost price of the article.



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**37.** A dishonest shopkeeper professes to sell pulses at his cost price but uses a false weight of 950 gm for each kilogram. Find his gain percent.



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**38.** A dealer bought two tables for Rs 3120. He sold one of them at a loss of 15% and other at

a gain of 36%. Then he found that each table was sold for the same price. Find the cost price of each table.



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**39.** Mariam bought two fans for Rs 3605. She sold one at a profit of 15% and the other at a loss of 9%. If mariam obtained the same amount for each fan, find the cost price of each fan.



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**40.** Some toffees are bought at the rate of 11 for Rs 10 and the same number at the rate of 9 for Rs 10. If the whole lot is sold at one rupee per toffee, find the gain or loss percent on the whole transaction.



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**41.** A tricycle is sold at a gain of 16%. Had it been sold for Rs 100 more, the gain would have been 20%. Find the C.P. of the tricycle.



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**42.** Shabana bought 16 dozen ball pens and sold them at a loss equal to S.P. of 8 ball pens. Find (i) her loss percent (ii) S.P. of 1 dozen ball pens, if she purchased these 16 dozen ball pens for Rs 576.



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**43.** The difference between two selling prices of a shirt at profits of 4% and 5% is Rs 6. Find C.P. of a shirt and the selling prices of both the shirts.



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**44.** Toshiba bought 100 hens for Rs 8000 and sold 20 of these at a gain of 5%. At what gain percent she must sell the remaining hens so as to gain 20% on the whole?





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**45.** Find S.P. if M.P.= Rs 650 and Discount = 10%

M.P. = Rs 5450 and Discount = 5%



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**46.** Find the M.P, if (i) S.P. = Rs 3430 and,

Discount = 2% (ii) S.P. = Rs 9250 and, Discount =

$7\frac{1}{2}\%$



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**47.** Find discount in percent when M.P. = Rs 625 and S.P. = Rs 562.50  
M.P. = Rs 1600 and S.P. = Rs 1180



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**48.** At a clearance sale, all goods are on sale at 45% discount. If I buy a skirt marked Rs 600, how much would I need to pay?



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**49.** After allowing a discount of 12% on the marked price of an article, it is sold for Rs 880. Find its marked price.



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**50.** A shopkeeper offers 10% discount and still makes a profit of 26% what is the cost price if the marked price is Rs 280?



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51. A shopkeeper marks his goods in such a way that after allowing a discount of 12.5% on marked price he still makes a profit of 10%. If the cost price of good is Rs 245, then find its marked price.



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52. A dealer buys an article 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%?



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**53.** A trader allows a discount of 15% of the marked price on his article. How much above the cost price should he mark to gain 19% ?



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**54.** I mark up the computers, I am selling, by 20% and sell them at a discount of 15% . What is my net gain percent?



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**55.** Articles are marked at a price which gives a profit of 25%. After allowing a certain discount, the profit reduces to  $12\frac{1}{2}\%$ . Find the discount percent.



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**56.** A cycle merchant allows 25% commission on his advertised price and still makes a profit of 20%. If he gains Rs 60 over the sale of one cycle, find his advertised price.





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**57.** The marked price of shirt was Rs 165 and it was sold at a discount of 12%. Find the discount allowed on the shirt and also its selling price.



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**58.** A trader marks his goods 20% above the cost price. If he gives a discount of 10% on marked price, then find his gain percent.





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**59.** How much percent more than the C.P. should a manufacture mark his goods so that after allowing a discount of 20% on the marked price he gains 10% ?



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**60.** A shopkeeper allows a discount of 10% to his customers and still gains 20%. Find the

marked price of an article which costs Rs 450 to the shopkeeper.



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**61.** A trader buys certain items at 32% off the list price and he wants to make a profit of 25% after allowing a discount of 20%. At what percent above the list price should he mark the items?



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**62.** A dealer of scientific instruments allows 20% discount on the marked price of the instruments and still makes a profit of 25 %. If his gain over the sale of an instrument is Rs 150, find the marked price of the instrument.



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**63.** Find the S.P. if (i) M.P. = Rs 1300 and Discount = 10% (ii) M.P. = Rs 500 and discount = 15 %



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**64.** Find the M.P. if

(1). S.P. = Rs 1222 and Discount = 6%

(2). S.P.= Rs 495 and Discount = 1 %



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**65.** Find discount in percent when (a) M.P. = Rs 900 and S. P. = Rs 873 (b) M.P.= Rs 500 and S.P. = Rs 425



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**66.** A shop selling sewing machines offers 3% discount on all cash purchases. What cash amount does a customer pay for a sewing machine the price of which is marked as Rs 650.



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**67.** The marked price of a ceiling fan is Rs. 720. During off season, it is sold for Rs.684. Determine the discount percent.



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**68.** On the eve of Gandhi Jayanti a saree is sold for Rs 720 after allowing 20% discount. What is its marked price?



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**69.** After allowing discount of  $7\frac{1}{2}\%$  on the marked price, an article is sold for Rs. 555. Find its marked price.



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**70.** A shopkeeper allows his customers 10% off on the marked price of goods and still gets a profit of 25%. What is the actual cost to him of an article marked Rs 250?



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**71.** A shopkeeper allows 20% off on the marked price of goods and still gets a profit of 25%.

What is the actual cost to him of an article marked Rs 500?



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**72.** A tradesman marks his goods at such a price that after allowing a discount of 15%, he makes a profit of 20%. What is the marked price of an article whose cost price is Rs 170?



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**73.** A shopkeeper marks his goods in such a way that after allowing a discount of 25% on the marked price, he still makes a profit of 50%. Find the ratio of the C.P. to the M.P.



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**74.** A cycle dealer offers a discount of 10% and still makes a profit of 26%. What is the actual cost to him of a cycle whose marked price is Rs 840?





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**75.** A shopkeeper allows 23% commission on his advertised price and still makes a profit of 10%. If he gains Rs 56 on one item, find his advertised price.



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**76.** A shopkeeper marks his goods at 40%, above the cost price but allows a discount of 5% for cash payment to his customers. What

actual profit does he make, if he receives Rs 1064 after paying the discount?



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77. By selling a pair of earrings at a discount of 25% on the marked price, a jeweller makes a profit of 16%. If the profit is Rs 48, what is the cost price? What is the marked price and the price at which the pair was eventually bought?



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78. A publisher given 32% discount on the printed price of a book to booksellers. What does a bookseller pay for a book whose printed price is Rs 275?



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79. After allowing a discount of 20% on the marked price of a lamp, a trader loses 10%. By what percentage is the marked price above the cost price?



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**80.** The list price of a table fan is Rs 480 and it is available to a retailer at 25% discount. For how much should a retailer sell it to gain 15%?



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**81.** Rohit buys an item at 25% discount on the marked price. He sells it for 660, making a profit of 10%. What is the marked price of the item?



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**82.** A cycle merchant allows 20% discount on the marked price of the cycles and still makes a profit of 20%. If he gains Rs 360 over the sale of cycle, find the marked price of the cycle.



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**83.** Jyoti and Meena run a ready-made garment shop. They mark the garments at such a price that even after allowing a discount of 12.5%,

they make a profit of 10%. Find the marked price of a suit which costs them Rs 1470.



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**84.** What price should Aslam mark on a pair of shoes which costs him Rs 1200 so as to gain 12% after allowing a discount of 16%?



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**85.** Jasmine allows 4% discount on the marked price of her goods and still earns a profit of 20%. What is the cost price of a shirt for her marked at Rs 850?



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**86.** A shopkeeper offers 10% off-season discount to the customers and still makes a profit of 26%. What is the cost price for the



shopkeeper on a pair of shoes marked at Rs 1120?



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**87.** A lady shopkeeper allows her customers 10% discount on the marked price of the goods and still gets a profit of 25%. What is the cost price of a fan for her marked at Rs 1250?



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**88.** George bought a V.C.R. at the list price of Rs 18,500. If the rate of VAT was 8%, find the amount he had to pay for purchasing the V.C.R



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**89.** The price of a T.V set inclusive of VAT is Rs 13,530. If the rate of VAT is 10%, find its basic price.



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**90.** Samir bought a shirt for Rs 336, including 12% VAT and a neck-tie for Rs 110 including 10% VAT. Find the printed price (without VAT) of shirt and neck- tie together.



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**91.** Reena goes to a shop to buy a radio, costing RS 2568. The rate of value added tax is 7%. She tells the shopkeeper to reduce the price of the radio to such that she has to pay

Rs 2568, inclusive of value added tax. Find the reduction needed in the price of the radio.



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**92.** Divid purchased a pair of shoes for Rs 441 including value added tax. If the sales price of the shoes is Rs 420, Find the rate of value added tax.



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**93.** Samir bought the following articles from a departmental store: Item, Quantity, Rate per item (Rs), Rate of VAT

Item	Quantity	Rate per item (Rs)	Rate of VAT
Shirt	4	200.00	8%
Pair of Shoes	2	350.00	10%
Television	1	10900.00	10%
Tea-set	1	750.00	8%

Calculate the total bill paid, including VAT, by Samir to the departmental store.



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**94.** Hamida visits a departmental store and purchases the following articles: one rain coat for Rs 300, VAT @ 10%, one pair of shoes for Rs 460 and VAT @ 9%, food articles for Rs 450, VAT @ 5%, clothes for Rs 800, Vat @ 1% . Calculate the total amount of the bill .



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**95.** List price of a pair of shoes is Rs 450. If Amit paid Rs 45 VAT for it, find the rate of VAT.





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**96.** Nisha goes to a shop to buy a box costing Rs 981. The rate of the VAT is 9%. She tells the shopkeeper to allow a discount on the price of the box to such an extent that she pays Rs 981 inclusive of VAT. Find the discount in the price of the box.



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**97.** Amit purchases a motorcycle, having marked price Rs 46000 at a discount of 5%. If VAT is charged at the rate of 10%, find the amount Amit has paid to purchase the motorcycle.



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**98.** The list price of a refrigerator is Rs 9700. If a value added tax of 6% to be charged on it,



how much one has to pay to buy the refrigerator?



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**99.** Vikram bought a watch for Rs 825. If this amount includes 10% VAT on the list price , what was the list price of the watch?



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**100.** Aman bought a shirt for Rs 374.50 which includes 7% VAT. Find the list price of the shirt.



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**101.** Rani purchases a pair of shoes whose sale price is Rs 175. If she pays VAT at the rate of 7%, how much amount does she pay as VAT? Also, find the net value of the pair of shoes.



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**102.** Swarna paid Rs 20 as VAT on a pair of shoes worth Rs 250. Find the rate of VAT.



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**103.** Sarita buys goods worth Rs 5500. She gets a rebate of 5% on it. After getting the rebate if VAT at the rate of 5% is charged, find the amount she will have to pay for the goods.



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**104.** The cost of furniture inclusive of VAT is Rs 7150. If the rate of VAT is 10%, find the original cost of the furniture.



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**105.** A refrigerator is available for Rs 13750 including VAT. If the rate of VAT is 10%, find the original cost the furniture.



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**106.** A colour TV is available for Rs 13440 inclusive VAT. If the original cost of TV is Rs 12000, find the rate of VAT.



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**107.** Reena goes to a shop to buy a radio, costing Rs 2568. The rate of VAT is 7%. She tells the shopkeeper to reduce the price of the radio such that she has to pay Rs 2568,

inclusive of VAT. Find the reduction needed in the price of radio.



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**108.** Rajat goes to a departmental store and buys the following articles: Items, Price per item, Rate of VAT

Items	Price per item	Rate of VAT
2 Paris of shoes	Rs.800	2%
1 Sewing machine	Rs.1500	5%
2 Tea-sets	Rs.650	4%

Calculate the total amount he has to pay to the store.



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**109.** Ajit buys a motorcycle for Rs 17600 including value added tax. If the rate of VAT is 10%, what is the selling price of the motorcycle?



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**110.** Manoj buys a leather coat costing Rs 900 at Rs 990 after paying the VAT. Calculate the rate of VAT charged on the coat.



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**111.** Rakesh goes to a departmental store and purchases the following articles: biscuits and bakery products costing Rs 50, VAT @ 5%, medicines costing Rs 90, VAT @ 10%, clothes costing Rs 400. VAT @ 1% , and cosmetics costing Rs 150, VAT @ 10%. Calculate the total amount paid by Rakesh to the store.



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**112.** Rajeeta purchased a set of cosmetics. She paid Rs 165 for it including VAT. If the rate of VAT is 10%, find the selling price of the set.



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**113.** Sunita purchases a bicycle for Rs 660. She has paid a VAT of 10%. Find the list price of the bicycle?



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**114.** The sales price of a television, inclusive of VAT, is Rs 13500. If VAT is charged at the rate of 8% of the list price, find the list price of the television.



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**115.** Shikha purchased a car with a marked price of Rs 210000 at a discount of 5%. If VAT is charged at the rate of 10%, find the amount shikha had paid for purchasing the car.



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**116.** Shruti bought a set of cosmetic items for Rs 345 including 15% value added tax and a purse for Rs 110 including 10% VAT. What percent is the VAT charged on the whole transaction?



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**117.** List price of a cooler is Rs 2563. The rate of VAT is 10%. The customer requests the

shopkeeper to allow a discount in the price of the cooler to such an extent that the price remains Rs 2563 inclusive of VAT. Find the discount in the price of the cooler.



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**118.** List price of a washing machine is Rs 9000. If the dealer allows a discount of 5% on the cash payment, how much money will a customer pay to the dealer in cash, if the rate of VAT is 10%?



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