

1. The marked price and the rate of sales tax of different items are given below.
Calculate the amount to be paid for each of them:

S. No.	Item	Marked Price	Rate of Sales Tax
(i)	Walkman	₹ 1,750.00	8.5%
(ii)	Washing machine	₹14,840.00	7.5%
(iii)	Computer	₹ 32,725.00	12%
(iv)	Sofa set	₹ 16,000.00	11.5%
(v)	T.V.	₹ 28,975.00	16%
(vi)	Jacket	₹ 1,260.00	10%
(vii)	Camera	₹ 4,500.00	9%
(viii)	Air conditioner	₹ 21,650.00	14%

Solution:-

(i)

From the table it is given that,

Marked price = ₹ 1,750, Rate of sales tax = 8.5%

We know that, Sales tax = (marked price × rate of sale tax)/100
 $= (1,750 \times 8.5)/100$
 $= ₹ 148.75$

Then, Amount = marked price + sales tax
 $= ₹ 1,750 + ₹ 148.75$
 $= ₹ 1,898.75$

(ii)

From the table it is given that,

Marked price = ₹ 14,840, Rate of sales tax = 7.5%

We know that, Sales tax = (marked price × rate of sale tax)/100
 $= (14,840 \times 7.5)/100$
 $= ₹ 1,113$

Then, Amount = marked price + sales tax
 $= ₹ 14,840 + ₹ 1,113$
 $= ₹ 15,953$

(iii)

From the table it is given that,

Marked price = ₹ 32,725, Rate of sales tax = 12%

We know that, Sales tax = (marked price × rate of sale tax)/100
 $= (32,725 \times 12)/100$
 $= ₹ 3,927$

Then, Amount = marked price + sales tax

$$\begin{aligned} &= ₹ 32,725 + ₹ 3,927 \\ &= ₹ 36,652 \end{aligned}$$

(iv)

From the table it is given that,

Marked price = ₹ 16,000, Rate of sales tax = 11.5%

$$\begin{aligned} \text{We know that, Sales tax} &= (\text{marked price} \times \text{rate of sale tax})/100 \\ &= (16,000 \times 11.5)/100 \\ &= ₹ 1,840 \end{aligned}$$

$$\begin{aligned} \text{Then, Amount} &= \text{marked price} + \text{sales tax} \\ &= ₹ 16,000 + ₹ 1,840 \\ &= ₹ 17,840 \end{aligned}$$

(v)

From the table it is given that,

Marked price = ₹ 28,975, Rate of sales tax = 16%

$$\begin{aligned} \text{We know that, Sales tax} &= (\text{marked price} \times \text{rate of sale tax})/100 \\ &= (28,975 \times 16)/100 \\ &= ₹ 4,636 \end{aligned}$$

$$\begin{aligned} \text{Then, Amount} &= \text{marked price} + \text{sales tax} \\ &= ₹ 28,975 + ₹ 4,636 \\ &= ₹ 33,611 \end{aligned}$$

(vi)

From the table it is given that,

Marked price = ₹ 1,260, Rate of sales tax = 10%

$$\begin{aligned} \text{We know that, Sales tax} &= (\text{marked price} \times \text{rate of sale tax})/100 \\ &= (1,260 \times 10)/100 \\ &= ₹ 126 \end{aligned}$$

$$\begin{aligned} \text{Then, Amount} &= \text{marked price} + \text{sales tax} \\ &= ₹ 1,260 + ₹ 126 \\ &= ₹ 1,385 \end{aligned}$$

(vii)

From the table it is given that,

Marked price = ₹ 4,500, Rate of sales tax = 9%

$$\begin{aligned} \text{We know that, Sales tax} &= (\text{marked price} \times \text{rate of sale tax})/100 \\ &= (4,500 \times 9)/100 \\ &= ₹ 405 \end{aligned}$$

$$\begin{aligned} \text{Then, Amount} &= \text{marked price} + \text{sales tax} \\ &= ₹ 4,500 + ₹ 405 \end{aligned}$$

$$= ₹ 4,905$$

(viii)

From the table it is given that,

Marked price = ₹ 21,650, Rate of sales tax = 14%

$$\begin{aligned} \text{We know that, Sales tax} &= (\text{marked price} \times \text{rate of sale tax})/100 \\ &= (21,650 \times 14)/100 \\ &= ₹ 3,031 \end{aligned}$$

Then, Amount = marked price + sales tax

$$\begin{aligned} &= ₹ 21,650 + ₹ 3,031 \\ &= ₹ 24,681 \end{aligned}$$

2. Find the rate of sales tax of the following items whose marked price and sales tax are given below:

S. No.	Item	Marked Price	Sales Tax
(i)	Shoes	₹ 2,740.00	₹ 137.00
(ii)	Music system	₹ 16,400.00	₹ 2,050.00
(iii)	Vacuum cleaners	₹ 8,325.00	₹ 1,332.00
(iv)	Digital diary	₹ 3,500.00	₹ 367.50
(v)	VCD	₹ 27,916.00	₹ 4,047.82

Solution:-

(i)

From the table it is given that,

Marked price = ₹ 2,740.00, Sales tax = ₹ 137

$$\begin{aligned} \text{We know that, Rate of sales tax} &= (100 \times \text{Sale tax})/\text{marked price} \\ &= (100 \times 137)/2,740.00 \\ &= 5\% \end{aligned}$$

Therefore, rate of sales tax is 5%.

(ii)

From the table it is given that,

Marked price = ₹ 16,400, Sales tax = ₹ 2,050

$$\begin{aligned} \text{We know that, Rate of sales tax} &= (100 \times \text{Sale tax})/\text{marked price} \\ &= (100 \times 2,050)/16,400 \\ &= 12\% \end{aligned}$$

Therefore, rate of sales tax is 12%.

(iii)

From the table it is given that,

Marked price = ₹ 8,325, Sales tax = ₹ 1,332

We know that, Rate of sales tax = $(100 \times \text{Sale tax})/\text{marked price}$
 $= (100 \times 1,332)/8,325$
 $= 16\%$

Therefore, rate of sales tax is 16%.

(iv)

From the table it is given that,

Marked price = ₹ 3,500, Sales tax = ₹ 367.50

We know that, Rate of sales tax = $(100 \times \text{Sale tax})/\text{marked price}$
 $= (100 \times 367.50)/3,500$
 $= 10.5\%$

Therefore, rate of sales tax is 10.5%.

(v)

From the table it is given that,

Marked price = ₹ 27,916, Sales tax = ₹ 4,047.82

We know that, Rate of sales tax = $(100 \times \text{Sale tax})/\text{marked price}$
 $= (100 \times 4,047.82)/27,916$
 $= 14.5\%$

Therefore, rate of sales tax is 14.5%.

3. Find the amount paid by Rajesh to buy a leather bag whose list price is ₹ 4,850 and the rate of sales tax is 12%.

Solution:-

From the question it is given that,

List price of the leather bag = ₹ 4,850

Then, rate of sales tax = 12%

We know that, Sales tax = $(\text{list price} \times \text{rate of sale tax})/100$
 $= (4,850 \times 12)/100$
 $= ₹ 582$

Then,

The amount paid by Rajesh to buy Leather bag = List price + Sales tax
 $= ₹ 4,850 + ₹ 582$
 $= ₹ 5,432$

4. A watch is listed at ₹ 15,500 and the sales tax on it is 18%. Find the selling price of the watch.

Solution:-

From the question it is given that,

Rate of sales tax on watch = 18 %

Listed price of watch = ₹ 15,500

$$\begin{aligned}\text{We know that, Sales tax} &= (\text{list price} \times \text{rate of sale tax})/100 \\ &= (15,500 \times 18)/100 \\ &= ₹ 2,790\end{aligned}$$

$$\begin{aligned}\text{Then, Selling price of watch} &= ₹ (15,500 + 2,790) \\ &= ₹ 18,290\end{aligned}$$

5. Find the selling price of an electronic washing machine priced at ₹ 24,600 and carrying a sales tax of 15%.

Solution:-

From the question it is given that,

List price of electronic washing machine = ₹ 24,600

Rate of sales tax = 15%

$$\begin{aligned}\text{We know that, Sales tax} &= (\text{list price} \times \text{rate of sale tax})/100 \\ &= (24,600 \times 15)/100 \\ &= ₹ 3,690\end{aligned}$$

$$\begin{aligned}\text{Then, Selling price of watch} &= ₹ (24,600 + 3,690) \\ &= ₹ 28,290\end{aligned}$$

6. The list price of a chair is ₹ 7,500 and the sales tax on it is ₹ 1,125. Find the rate of sales tax.

Solution:-

From the question it is given that,

The list price of chair = ₹ 7,500

Sales tax = ₹ 1,125

$$\begin{aligned}\text{We know that, Rate of sales tax} &= (100 \times \text{Sale tax})/\text{marked price} \\ &= (100 \times 1,125)/7,500 \\ &= 15\%\end{aligned}$$

Therefore, rate of sales tax is 15%.

7. A samsung plasma T.V. is priced in the showroom at ₹ 68,000. The sales tax on it is ₹ 14,960. Find the rate of sales tax.

Solution:-

From the question it is give that,

Price of samsung plasma T.V. in the showroom = ₹ 68,000

Sales tax = ₹ 14,960

We know that, Rate of sales tax = $(100 \times \text{Sale tax})/\text{marked price}$
 $= (100 \times 14,960)/68,000$
 $= 22\%$

Therefore, rate of sales tax is 22%.

8. The marked price of an article is ₹ 17,840 and the sales tax on it is ₹ 2,230. Find the rate of sales tax.

Solution:-

From the question it is given that,

The marked price of an article is ₹ 17,840

The sales tax = ₹ 2,230

We know that, Rate of sales tax = $(100 \times \text{Sale tax})/\text{marked price}$
 $= (100 \times 2,230)/17,840$
 $= 12.5\%$

Therefore, rate of sales tax is 12.5%.

9. The total cost of a refrigerator including sales tax is ₹ 30,940. If the rate of sales tax 12 %, find the basic price of the refrigerator.

Solution:-

From the question it is given that,

The total cost of a refrigerator including sales tax is ₹ 30,940

The rate of sales tax 12 %

Let us assume the basic price of refrigerator be y .

So, total price of the refrigerator = ₹ $(y + ((y \times 12)/100))$
 $= ₹ 112y/100$

Then, $112y/100 = ₹ 30,940$

By cross multiplication we get,

$$112y = 30,940 \times 100$$

$$112y = 30,94,000$$

$$y = 30,94,000/112$$

$$y = ₹ 27,625$$

Therefore, the basic price of refrigerator is ₹ 27,625.

10. The price of a T.V. set inclusive of sales tax at the rate of 14% is ₹ 30,552. Find the basic price of the T.V. set.

Solution:-

From the question it is given that,

The total cost of a T.V. set including sales tax is ₹ 30,552

The rate of sales tax 14 %

Let us assume the basic price of T.V. set be y .

$$\begin{aligned}\text{So, total price of the T.V. set} &= ₹ (y + ((y \times 14)/100)) \\ &= ₹ 114y/100\end{aligned}$$

$$\text{Then, } 114y/100 = ₹ 30,552$$

By cross multiplication we get,

$$114y = 30,552 \times 100$$

$$114y = 30,55,200$$

$$y = 30,55,200/114$$

$$y = ₹ 26,800$$

Therefore, the basic price of T.V. set is ₹ 27,625.

11. The price of a pair of Nike shoes including sales tax at the rate of 7% is ₹ 1,572.90. Find the basic price of the shoes.

Solution:-

From the question it is given that,

The total cost of a Nike shoes including sales tax is ₹ 1,572.90

The rate of sales tax 7 %

Let us assume the basic price of Nike shoes be y .

$$\begin{aligned}\text{So, total price of the Shoes} &= ₹ (y + ((y \times 7)/100)) \\ &= ₹ 107y/100\end{aligned}$$

$$\text{Then, } 107y/100 = ₹ 1,572.90$$

By cross multiplication we get,

$$107y = 1,572.90 \times 100$$

$$107y = 1,57,290$$

$$y = 1,57,290/107$$

$$y = ₹ 1,470$$

Therefore, the basic price of shoes is ₹ 1,470.

12. The price of a scooter including sales tax at the rate of 11% is ₹ 37,462.50. Find the basic price of the scooter.

Solution:-

From the question it is given that,

The total cost of a scooter including sales tax is ₹ 37,462.50

The rate of sales tax 11 %

Let us assume the basic price of scooter be y .

$$\begin{aligned}\text{So, total price of the scooter} &= ₹ (y + ((y \times 11)/100)) \\ &= ₹ 111y/100\end{aligned}$$

$$\text{Then, } 111y/100 = ₹ 37,462.50$$

By cross multiplication we get,

$$111y = 37,462.50 \times 100$$

$$111y = 37,46,250$$

$$y = 37,46,250/111$$

$$y = ₹ 33,750$$

Therefore, the basic price of scooter is ₹ 33,750.

13. Laxman went to a shop to buy a fan costing ₹ 750. The rate of sales tax is 6%. He requests the shopkeeper to reduce the price to such an extent that he has to pay only ₹ 742 including the sales tax. Find the reduction needed in the price of the fan.

Solution:-

From the question it is given that,

The cost of fan is ₹ 750

The rate of sales tax 6 %

Let us assume the reduced price of fan be y .

$$\begin{aligned}\text{So, total amount of the fan} &= y + 6\% \text{ of } y \\ &= 1y + (6/100)y \\ &= 106y/100\end{aligned}$$

But, the total amount of the fan to be paid = ₹ 742

$$\text{Then, reduced price} = 106y/100 = ₹ 742$$

$$y = (742 \times 100)/106$$

$$y = ₹ 74,200/106$$

$$y = ₹ 700$$

Therefore, reduction needed = ₹ 750 - ₹ 700 = ₹ 50

14. Nirmala went to a shop to buy a titan watch. The cost of the watch was ₹ 3,250. The rate of sales tax is 12%. The shopkeeper gave her a discount such that she got the watch for only ₹ 3,248. Find the discount given by the shopkeeper.

Solution:-

From the question it is given that,

The cost of titan watch is ₹ 3,250

The rate of sales tax 12 %

Let us assume the reduced price of watch be y .

So, total amount of the fan = $y + 12\%$ of y

$$= 1y + (12/100)y$$
$$= 112y/100$$

But, the total amount of the watch to be paid = ₹ 3,248

Then, reduced price = $112y/100 = ₹ 3,248$

$$y = (3,248 \times 100)/112$$

$$y = ₹ 3,24,800/112$$

$$y = ₹ 2,900$$

Therefore, reduction needed = ₹ 3,250 - ₹ 2,900 = ₹ 350

15. Anurag went to a shop to buy a leather coat costing ₹ 2,654. The sales tax on it is 9%. He requested the shopkeeper to reduce the price to such an extent that he has to pay only ₹ 2,616 including the sales tax. Find the reduction given by the shopkeeper.

Solution:-

From the question it is given that,

The cost of titan watch is ₹ 2,654

The rate of sales tax 9 %

Let us assume the reduced price of watch be y .

So, total amount of the fan = $y + 9\%$ of y

$$= 1y + (9/100)y$$

$$= 109y/100$$

But, the total amount of the watch to be paid = ₹ 2,616

Then, reduced price = $109y/100 = ₹ 2,616$

$$y = (2,616 \times 100)/109$$

$$y = ₹ 2,61,600/109$$

$$y = ₹ 2,400$$

Therefore, reduction needed = ₹ 2,654 - ₹ 2,400 = ₹ 254