MATHEMATICS · GRADES 7-9

Sales tax

Difficulty level: Intermediate

Mathematics: Grades 7-9

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Overview of the concept

This is how you work out the real price you will pay at the till, by adding the tax on top of the shelf price before you reach the checkout. A shopper with a set budget needs to know the total with tax, not just the price on the tag. A teenager saving for headphones learns fast that the shelf price is not the price they will actually pay. Knowing sales tax tells you how to work out the full cost before you buy, so the total at the till never surprises you.



Rule

Sales tax: total = price + tax, and tax = rate × price.

Turn the rate into a decimal, multiply it by the price to get the tax, then add the tax to the price.

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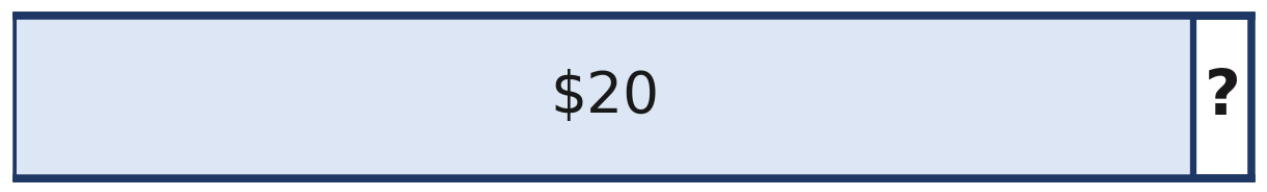
Worked examples

EXAMPLE 1

Q A book costs $20 before tax. Sales tax is 5 percent. Find the total cost.



SOLUTION

Picture it: the $20 bar is the price, and the small "?" slice is the tax still to find.

Find the tax: 5 percent of $20 is 0.05 × 20 = $1

Add the tax to the price: 20 + 1 = 21

So the total cost is $21.

EXAMPLE 2

Q A game costs $40 before tax. Sales tax is 13 percent. Find the total cost.



SOLUTION

Picture it: the $40 bar is the price, and the small "?" slice is the tax still to find.

Find the tax: 13 percent of $40 is 0.13 × 40 = $5.20

Add the tax to the price: 40 + 5.20 = 45.20

So the total cost is $45.20.

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Practice questions

1. A shirt costs $30 before tax. Tax is 10%. Find the total cost

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2. A toy costs $50 before tax. Tax is 8%. Find the tax amount

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3. The tax on a meal is $3 at a rate of 12%. What was the price of the meal before tax?

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4 You buy two pens at $10 each. The shop adds 5% tax. How much tax is added in total?

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5 A jacket costs $80 before tax. Tax is 15%. You pay with a $100 bill. How much change do you get?

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6 A book costs $12 before tax. With 25% tax, you pay $15 in total. How much of that $15 is tax?

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7 A phone costs $220 including 10% tax. What was the price before tax?

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8 A snack costs $4 before tax. After tax it costs $4.20. What is the tax rate?

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9 A bag costs $60 before tax, on sale for 25% off. Tax is 20% on the sale price. What is the total cost?

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10 A hat costs $45 before tax. How much more tax do you pay at 10% than at 5%?

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ANSWER KEY

1. 33

2. 4

3. 25

4. 1

5. 8

6. 3

7. 200

8. 5%

9. 54

10. 2.25

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