

Grade 7 · Percent Problems: Tax, Tips, Markups and Discounts · Quiz

Common Core 7.RP.A.3 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

Ten multiple-choice questions on percent problems with money: sales tax, tips, markups, discounts, commission and simple interest. Each question has exactly one correct answer. Change each percent to a decimal first. The explanation after each question shows the typical mistake.

Grade 7 Common Core: 7.RP.A.3

Questions

Question 1

What is the sales tax on this sweatshirt?



Price tag for a sweatshirt.

- A. .00
- B. .00
- C. .20
- D. .00

Question 2

Which multiplier gives the sale price after a 30% discount?

- A. 1.30
- B. 0.70
- C. 0.30

D. 0.07

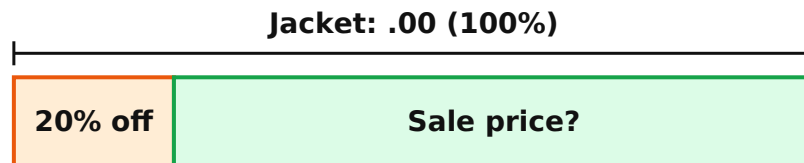
Question 3

Sofia's lunch costs .00 before tip. She leaves a 15% tip. What is the total she pays?

- A. .00
- B. .00
- C. .00
- D. .15

Question 4

What is the sale price of this jacket?



A bar model of the jacket price.

- A. .00
- B. .00
- C. .00
- D. .00

Question 5

A store pays for a backpack and marks it up 30%. What is the selling price?

- A. .00
- B. .00
- C. .00
- D. .00

Question 6

Priya earns a 6% commission. How much does she earn on ,500 of sales?

- B. ,500
- C. ,650

D. 0

Question 7

How much simple interest does 0 earn at 4% per year in 3 years?

C. 0

Question 8

An item costs 0. It is discounted 20%, and then the sale price is discounted another 10%. What is the final price?

Question 9

A scarf is 40% off and now costs . What was the original price?

A. .80

C. .20

Question 10

What is the total on this receipt after 5% sales tax is added to the subtotal?

Corner Deli	
Sandwich	.50
Drink	.50
Subtotal	.00
Sales tax 5%	?

A receipt before tax is added.

A. .05

B. .00

C. .60

D. .60

Answer key

1. **A** - $0.08 \times 25 = 2$. The amount .00 is the total, not the tax. Using 0.8 instead of 0.08 gives .00.
2. **B** - The customer pays $100\% - 30\% = 70\%$, so multiply by 0.70. The multiplier 0.30 gives only the discount amount.
3. **C** - The tip is $0.15 \times 40 = 6$, so the total is $40 + 6 = 46$. The amount .00 is only the tip.
4. **B** - $80 \times 0.80 = 64$. The amount .00 is the discount, and .00 adds the 20% instead of subtracting it.
5. **C** - The markup is $0.30 \times 60 = 18$, and the selling price is $60 + 18 = 78$. The amount .00 subtracts the markup.
6. **D** - $0.06 \times 2500 = 150$. Writing 6% as 0.6 gives ,500, and comes from using 0.006.
7. **A** - $I = 500 \times 0.04 \times 3 = 60$. The amount is the interest for one year only, and 0 is the final balance.
8. **D** - $100 \times 0.80 = 80$, and then $80 \times 0.90 = 72$. The answer wrongly adds the two discounts to get 30%.
9. **B** - is 60% of the original, so $42 \div 0.60 = 70$. Multiplying by 1.40 gives .80, which is a common mistake.
10. **D** - Tax: $0.05 \times 12 = 0.60$. Total: $12 + 0.60 = 12.60$. The amount .60 is only the tax.

Remember:

- Tax, tips and markups increase an amount: multiply by $1+r$. Discounts decrease it: multiply by $1-r$.
- The percent is taken of the original amount, which is 100%.
- Two successive discounts multiply, so 20% off and then 10% off equals 28% off, not 30%.
- Commission equals the rate times sales, and simple interest is $I = Prt$ with r written as a decimal.
- Follow the order of the story and round money to the nearest cent at the end.