

Grade 7 - Percent Problems: Tax, Tips, Discounts and Markups - Answer Key

Common Core 7.RP.A.3 · maths-pdf.fr/en/

Use this answer key to check your work on the percent problems worksheet. Every solution shows the steps, and the final answer appears in bold. If your answer is different, compare each step and look for the first place where the work changes.

Grade 7 · Common Core State Standards: **7.RP.A.3**

Exercise 1 - Percent of a number

$$0.15 \times 80 = 12$$

12

Exercise 2 - Sales tax

$$\text{Tax: } 0.08 \times 25 = 2.00$$

$$\text{Total: } 25 + 2 = 27$$

Tax \$2.00; total \$27.00

Exercise 3 - Restaurant tip

$$0.18 \times 42 = 7.56$$

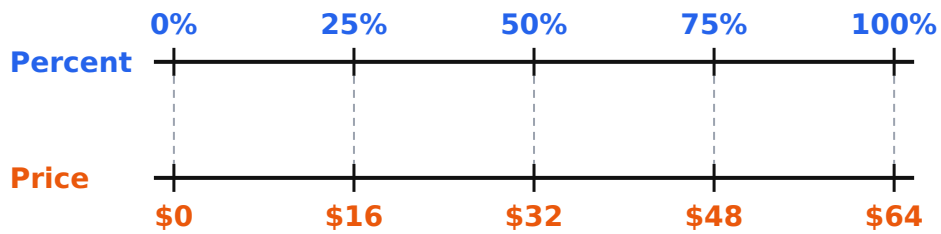
\$7.56

Exercise 4 - Jacket discount

$$\text{Discount: } 0.25 \times 64 = 16.$$

$$\text{Sale price: } 64 - 16 = 48.$$

Discount \$16; sale price \$48



25% of \$64 is \$16.

Exercise 5 - Percent increase

Change: $50 - 40 = 10$.

$$10 \div 40 = 0.25 = 25\%$$

25%

Exercise 6 - Percent decrease

Change: $80 - 60 = 20$.

$$20 \div 80 = 0.25 = 25\%$$

25%

Exercise 7 - Markup

Markup: $0.30 \times 20 = 6$.

$$20 + 6 = 26$$

\$26

Exercise 8 - Commission

$$0.06 \times 2500 = 150$$

\$150

Exercise 9 - Simple interest

$$I = prt = 800 \times 0.03 \times 4 = 96$$

\$96

Exercise 10 - Find the original price

A 40% discount means she pays 60% of the original price.

$$0.60 \times p = 36, \text{ so } p = 36 \div 0.6 = 60.$$

\$60

Exercise 11 - Percent error

$$\text{Error: } |48 - 50| = 2.$$

$$2 \div 50 = 0.04 = 4\%$$

4%

Exercise 12 - Find the tax rate

$$3.40 \div 50 = 0.068 = 6.8\%$$

6.8%

Exercise 13 - Bill with tip

$$\text{Tip: } 0.20 \times 36 = 7.20.$$

$$36 + 7.20 = 43.20$$

\$43.20

Exercise 14 - Discount then tax

$$\text{Sale price: } 0.75 \times 80 = 60.$$

$$\text{With tax: } 1.07 \times 60 = 64.20.$$

\$64.20

Exercise 15 - Town growth

Change: $13,750 - 12,500 = 1,250$.

$$1250 \div 12500 = 0.10 = 10\%$$

10%

Exercise 16 - Up then down

After the rise: $1.20 \times 100 = 120$.

After the drop: $0.80 \times 120 = 96$.

The 20% drop is taken of \$120, a larger amount than \$100.

\$96

Exercise 17 - Loan

Interest: $1200 \times 0.05 \times 2 = 120$.

$$1200 + 120 = 1320$$

Interest \$120; total \$1,320

Principal	\$1,200	
Interest	\$120	\$120

Interest is paid for each year.

Exercise 18 - Store profit

Marked price: $1.60 \times 45 = 72$.

Sale price: $0.80 \times 72 = 57.60$.

Profit: $57.60 - 45 = 12.60$.

Sale price \$57.60; profit \$12.60



Price after each step.

Exercise 19 - Base pay plus commission

Commission: $0.045 \times 6000 = 270$.

$$400 + 270 = 670$$

\$670

Exercise 20 - Estimate error

Error: $1200 - 1000 = 200$.

$$200 \div 1000 = 0.20 = 20\%$$

20%