

PERCENTS REVIEW

NAME Answer Key

1. Aubrey bought a pair of shoes. The original price was \$60. She bought them on sale for \$45.

What percent represents the discount that she saved?

$$\frac{\text{discount}}{\text{original}} = \frac{60-45}{60} = \frac{15}{60} = \frac{x}{100}$$

$$60x = 15 \cdot 100$$

$$\frac{60x = 1500}{60 \quad 60}$$

$$25 = x$$

25% discount

2. George bought a new laptop that was 10% off the original price of \$900. If he paid 7% sales tax, what was the total price he paid?

Amount of discount	Price after discount	Amount of tax	Total including tax
$\frac{x}{900} = \frac{10}{100}$ OR $900(0.10)$ 90 $900 \cdot 10 = 100x$ $\frac{9000 = 100x}{100 \quad 100}$ $90 = x$	900 -90 <hr/> 810	7% of 810 $\frac{x}{810} = \frac{7}{100}$ OR $810(0.07)$ 56.70 $810 \cdot 7 = 100x$ $5670 = 100x$ $56.70 = x$	810.00 $+ 56.70$ <hr/> $\$866.70$

3. Hala bought two candy bars for \$0.99 each and a bottle of water for \$1.29. If she paid 3% sales tax, what was the total cost?

Total cost of items without tax	Amount of tax	Total cost including tax
$0.99 + 0.99 + 1.29$ $\$3.27$	3% of 3.27 $\frac{x}{3.27} = \frac{3}{100}$ OR $3.27(0.03)$ 0.0981 $3.27(3) = 100x$ $9.81 = 100x$ $0.0981 = x$ (rounded)	3.27 $+ 0.10$ <hr/> $\$3.37$

4. A store paid \$2 for a box of cereal. They mark up the price by 50% to determine the selling price. What is the selling price of the box of cereal? $\$3$

Two strategies: find the amount of the markup and add to \$2

OR if the markup is 50%, the new price will be 150% of the original price

$\frac{\text{markup}}{\text{original}} = \frac{x}{2} = \frac{50}{100}$ $2 \cdot 50 = 100x$ $100x = 100$ $x = 1$	OR $\frac{x}{2} = \frac{150}{100}$ $2 \cdot 150 = 100x$ $300 = 100x$ $3 = x$
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amount of markup = \$1, so new price is \$3

5. What is the interest to be paid on a loan for \$2000 at an interest rate of 6% that will be paid back in 4 months? What is the total amount repaid?

Interest = $P \times R \times t$

(write percent as a decimal and time in years)

4 months = $\frac{4}{12} = \frac{1}{3}$

$i = 2000 (0.06) (\frac{1}{3})$

$i = 2000 (0.06) (0.33333)$

$i = 40$

Interest paid = \$40,
Total amount = \$2040

6. A box of ornaments had an original price of \$28. They are on sale for 25% off. You will pay a sales tax of 8% based off the discounted price. What will be the final cost of the ornaments?

Amount of discount	Price after discount	Amount of tax	Total including tax
$\frac{x}{28} = \frac{25}{100}$ $28 \cdot 25 = 100x$ $700 = 100x$ $7 = x$	$\begin{array}{r} 28 \\ -7 \\ \hline 21 \end{array}$	$\frac{x}{21} = \frac{8}{100}$ $21 \cdot 8 = 100x$ $168 = 100x$ $1.68 = x$	$\begin{array}{r} 21.00 \\ + 1.68 \\ \hline 22.68 \end{array}$