LESSON MAKER PRO

# Percent Price Moves

*Track how each percent changes the amount.*

**GRADE 7 · 7A.PR.A.3**

**7A.PR.A.3** "Solve multi-step percent problems in context using proportional reasoning, including simple interest, tax, gratuities, commissions, fees, markups and markdowns, percent increase, and percent decrease."

NAME _____ DATE _____

## USE THE RIGHT BASE

To find a percent of an amount, multiply by the percent written as a decimal. After a price changes, use the new amount for the next percent change unless the problem names a different amount to use.

## WORKED EXAMPLE

A $48 backpack is marked down 15%. Then 10% sales tax is added to the sale price. What is the final cost?

1. Find the discount: $48 × 0.15 = $7.20.
2. Find the sale price: $48 − $7.20 = $40.80.
3. Find tax on the sale price: $40.80 × 0.10 = $4.08.
4. Add the tax: $40.80 + $4.08 = $44.88.

**Answer: $44.88**

## PRACTICE 6 problems

**1** Sneakers cost $80. They are 20% off, and 8% sales tax is added to the sale price. What is the final cost?

**ANSWER** _____

**2** A restaurant bill is $50 before tax. Add 6% tax and an 18% tip based on the bill before tax. What is the total?

**ANSWER** _____

**3** A shop pays $30 for a game. It marks up the price by 40%, then offers 5% off that price. What is the sale price?

**ANSWER** _____

**4** You deposit $200 in an account that earns 4% simple interest each year for 3 years. The bank then deducts a one-time $2 fee. How much money is in the account?

**ANSWER** _____

**5** You earn a 12% commission on $120 in sales, plus a $3 bonus. How much do you earn?

**ANSWER** _____

**6** A $60 jacket goes up in price by 30%. Later, its new price is cut by 50%. What is the final price?

**ANSWER** _____

## APPLY IT Show your work

**1** You buy two tickets to a school concert for $28 each. The ticket site charges a booking fee of 12.5% of the ticket subtotal. How much do you pay in all?

WORK SPACE

**ANSWER** _____

**2** A hoodie you want costs $72. A sale takes 30% off, and the store adds 7.5% sales tax to the sale price. How much will you pay?

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

After a 20% discount and then 8% sales tax on the discounted price, a skateboard costs $51.84. What was its original price? Show how you know.

WORK SPACE AND ANSWER

**ANSWER KEY**

# Percent Price Moves

**GRADE 7 · 7A.PR.A.3**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | Sneakers cost $80. They are 20% off, and 8% sales tax is added to the sale price. What is the final cost? | **$69.12** |
| 2 | A restaurant bill is $50 before tax. Add 6% tax and an 18% tip based on the bill before tax. What is the total? | **$62.00** |
| 3 | A shop pays $30 for a game. It marks up the price by 40%, then offers 5% off that price. What is the sale price? | **$39.90** |
| 4 | You deposit $200 in an account that earns 4% simple interest each year for 3 years. The bank then deducts a one-time $2 fee. How much money is in the account? | **$222.00** |
| 5 | You earn a 12% commission on $120 in sales, plus a $3 bonus. How much do you earn? | **$17.40** |
| 6 | A $60 jacket goes up in price by 30%. Later, its new price is cut by 50%. What is the final price? | **$39.00** |

## PART 2 · APPLY IT

1. **$63.00** The tickets cost $56. The fee is $56 × 0.125 = $7, so the total is $63.
2. **$54.18** The sale price is $72 × 0.70 = $50.40. Tax is $50.40 × 0.075 = $3.78, making the total $54.18.

## CHALLENGE

**$60.00. The final cost is 0.80 × 1.08 = 0.864 of the original price, and $51.84 ÷ 0.864 = $60.00.**

Accept equivalent dollar amounts without trailing zeros. For the challenge, a correct guess-and-check method with both percent steps shown is also valid.