LESSON MAKER PRO

Percent Price Puzzles

Track each change from the new amount.

GRADE 7 · 7.RP.3

7.RP.3 "Solve multi-step real-world and mathematical problems involving ratios and percentages."

NAME _____ DATE _____

PERCENT CHANGES IN STEPS

When a percent changes an amount, find the new amount before doing the next step. A discount lowers the price, while sales tax raises the discounted price.

WORKED EXAMPLE

A shirt costs $45. It is 40% off, and then 4% sales tax is added. What is the final price?

1. Find the discount: 40% of $45 is $18.
2. Subtract the discount: $45 - $18 = $27.
3. Find the tax on the new price: 4% of $27 is $1.08.
4. Add the tax: $27 + $1.08 = $28.08.

Answer: $28.08

PRACTICE 6 problems

1 A poster costs $30. It is 30% off, and then 5% sales tax is added. What is the final price?

ANSWER _____

2 A bike helmet costs $60. Its price rises 15%, then a coupon takes 10% off the new price. What is the price after the coupon?

ANSWER _____

3 Start with 80. Increase it by 25%, then decrease the new amount by 30%. What is the result?

ANSWER _____

4 A shop has 120 stickers. It sells 35% of them on Monday, then 50% of the remaining stickers on Tuesday. How many stickers are left?

ANSWER _____

5 A book club has 80 members. Three-fifths of them attend a meeting. Of those who attend, 25% bring a friend. How many members bring a friend?

ANSWER _____

6 An account has 200 followers. The number rises by 15%, then falls by 10% of the new total. How many followers does the account have now?

ANSWER _____

APPLY IT Show your work

1 A video game costs $32. During a sale, it is 25% off. Then 5% sales tax is added to the sale price. How much does the game cost?

WORK SPACE

ANSWER _____

2 An esports night has 270 seats. Tickets for 60% of the seats sell online. At the door, one-third of the remaining tickets sell. How many seats stay empty?

WORK SPACE

ANSWER _____

CHALLENGE One step up

After a 20% discount and then 5% sales tax, a game controller costs $42. What was its original price? Explain how you know.

WORK SPACE AND ANSWER

ANSWER KEY

Percent Price Puzzles

GRADE 7 · 7.RP.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A poster costs $30. It is 30% off, and then 5% sales tax is added. What is the final price?	**$22.05**
2	A bike helmet costs $60. Its price rises 15%, then a coupon takes 10% off the new price. What is the price after the coupon?	**$62.10**
3	Start with 80. Increase it by 25%, then decrease the new amount by 30%. What is the result?	**70**
4	A shop has 120 stickers. It sells 35% of them on Monday, then 50% of the remaining stickers on Tuesday. How many stickers are left?	**39 stickers**
5	A book club has 80 members. Three-fifths of them attend a meeting. Of those who attend, 25% bring a friend. How many members bring a friend?	**12 members**
6	An account has 200 followers. The number rises by 15%, then falls by 10% of the new total. How many followers does the account have now?	**207 followers**

PART 2 · APPLY IT

1. **$25.20** The sale price is $32 - $8 = $24. Tax is $1.20, so the total is $25.20.
2. **72 seats** After online sales, 108 seats remain. One-third of 108 is 36, leaving 72 empty seats.

CHALLENGE

$50. Before tax, the discounted price was $42 / 1.05 = $40. That is 80% of the original price, and $40 / 0.80 = $50.

Accept equivalent calculations that apply each percent to the correct amount. For the challenge, students may also show that 80% of $50 is $40 and 5% tax brings it to $42.