

Percent Price Paths

Track each percent change in order.

GRADE 7 • MA.7.AR.3.1

MA.7.AR.3.1 "Apply previous understanding of percentages and ratios to solve multi-step real-world percent problems."

NAME _____

DATE _____

CHANGE ONE STEP AT A TIME

Find each percent amount by multiplying the current amount by its decimal form. In a multistep problem, complete each change in order, because a later percent may be based on a new amount.

WORKED EXAMPLE

A museum pass costs \$64. It is discounted 15%, then a 5% tax is added to the sale price. What is the final cost?

1. $15\% \text{ of } \$64 = 0.15 \times 64 = \$9.60.$

2. $\$64 - \$9.60 = \$54.40.$

3. $5\% \text{ of } \$54.40 = 0.05 \times 54.40 = \$2.72.$

4. $\$54.40 + \$2.72 = \$57.12.$

Answer: \$57.12

PRACTICE 6 problems

- 1** A \$48 phone case is on sale for 20% off. A 25% tax is added to the sale price. What is the final cost?

ANSWER _____

- 2** A meal costs \$36 before tax. Add 6% tax, then leave an 18% tip based on the meal cost only. What is the total cost?

ANSWER _____

- 3** After a 30% discount, a hoodie costs \$42. What was the original price?

ANSWER _____

- 4** A game player has 200 coins. They earn 35% more coins, then spend 20% of the new total. How many coins remain?

ANSWER _____

- 5** A store marks up a \$75 backpack by 40%, then discounts the marked-up price by 25%. What is the final price?

ANSWER _____

- 6** A photography club has 150 photos. It selects 28% of them for a display, then shares $\frac{1}{3}$ of the selected photos online. How many photos are shared online?

ANSWER _____

APPLY IT Show your work

- 1** Jordan buys a \$72 ticket to a music festival online. A 25% student discount is applied, and then an 8% service fee is added to the discounted price. How much does Jordan pay?

WORK SPACE

ANSWER _____

- 2** A gaming headset costs \$180. Sales tax is 7%, and a \$30 gift card is used after tax is added. How much money does the buyer pay?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A school spirit shop lists a sweatshirt for \$96. It is first discounted 25%, then an extra 10% is taken off the sale price. A 7.5% tax is added after both discounts. What is the final cost? In one sentence, explain why the two discounts are not simply 35% off.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A \$48 phone case is on sale for 20% off. A 25% tax is added to the sale price. What is the final cost?	\$48.00
2	A meal costs \$36 before tax. Add 6% tax, then leave an 18% tip based on the meal cost only. What is the total cost?	\$44.64
3	After a 30% discount, a hoodie costs \$42. What was the original price?	\$60.00
4	A game player has 200 coins. They earn 35% more coins, then spend 20% of the new total. How many coins remain?	216 coins
5	A store marks up a \$75 backpack by 40%, then discounts the marked-up price by 25%. What is the final price?	\$78.75
6	A photography club has 150 photos. It selects 28% of them for a display, then shares $\frac{1}{3}$ of the selected photos online. How many photos are shared online?	14 photos

PART 2 • APPLY IT

1. **\$58.32** Find the discounted price, $\$72 \times 0.75 = \54 . Then add the service fee by multiplying $\$54 \times 1.08$.
2. **\$162.60** Add tax first, $\$180 \times 1.07 = \192.60 . Subtract the \$30 gift card from that total.

CHALLENGE

\$69.66; the second discount is 10% of \$72, not 10% of \$96, so the total discount is not 35%.

Accept equivalent dollar notation, such as 48 or \$48.00. For the meal problem, the tip must be calculated from the original \$36 meal cost, not from the taxed total.