LESSON MAKER PRO

Percent Power Moves

Solve price changes, fees, tips, and interest in steps.

GRADE 7 · 7.RP.A.3

CCSS.Math.Content.7.RP.A.3 "Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error."

NAME _____ DATE _____

BUILD EACH STEP

Find each percent change from the amount at that step. For a decrease, subtract the percent amount. For an increase, add the percent amount. When there are two changes, finish the first change before finding the next one.

WORKED EXAMPLE

A $64 backpack is marked down 25%, then 6% sales tax is added. What is the final cost?

1. Find the markdown: 25% of $64 = $16.
2. Subtract the markdown: $64 - $16 = $48.
3. Find the tax: 6% of $48 = $2.88.
4. Add the tax: $48 + $2.88 = $50.88.

Answer: $50.88

PRACTICE 6 problems

1 A $50 water bottle is marked down 20%, then 8% sales tax is added. What is the final price?

ANSWER _____

2 A game costs $36 before a store adds a 15% markup. What is the new price?

ANSWER _____

3 A $30 meal has an 18% gratuity. What is the gratuity amount?

ANSWER _____

4 Find the simple interest on $200 at 3% per year for 2 years.

ANSWER _____

5 A pair of shoes was $80 and is now $68. What is the percent decrease?

ANSWER _____

6 A club charges a base fee plus a 10% processing fee. The total is $55. What is the base fee?

ANSWER _____

APPLY IT Show your work

1 A school dance ticket costs $40. You use a 15% coupon, and then 7% sales tax is added to the discounted price. What is the final cost of the ticket?

WORK SPACE

ANSWER _____

2 A game design club sells 24 sticker packs for $5 each. An online marketplace keeps 10% of the sales, and the club then pays a $12 booth fee. How much money does the club have left?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A headset is reduced by 20%, then reduced another 10% of the discounted price. The final price is $72 before tax. What was the original price? Explain why you do not add the two discounts.

WORK SPACE AND ANSWER

ANSWER KEY

Percent Power Moves

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A $50 water bottle is marked down 20%, then 8% sales tax is added. What is the final price?	**$43.20**
2	A game costs $36 before a store adds a 15% markup. What is the new price?	**$41.40**
3	A $30 meal has an 18% gratuity. What is the gratuity amount?	**$5.40**
4	Find the simple interest on $200 at 3% per year for 2 years.	**$12**
5	A pair of shoes was $80 and is now $68. What is the percent decrease?	**15%**
6	A club charges a base fee plus a 10% processing fee. The total is $55. What is the base fee?	**$50**

PART 2 · APPLY IT

1. **$36.38** The coupon lowers the price by $6, so the discounted price is $34. Sales tax is $2.38, making the total $36.38.
2. **$96** The club earns $120 in sales, and the marketplace keeps $12. After the $12 booth fee, the club has $96 left.

CHALLENGE

Original price: $100. The discounts are applied one after the other, so the final price is 80% of the original and then 90% of that amount, which is 72% of the original.

Accept equivalent money notation, such as 43.2 for $43.20, when the value is correct. For the challenge, accept a correct explanation that identifies the second discount as a percent of the already discounted price.