LESSON MAKER PRO

Percent Price Paths

Use ratios and percents through more than one step.

GRADE 7 · 7.PAR.4.9

7.PAR.4.9 "Use proportional relationships to solve multi-step ratio and percent problems presented in applicable situations."

NAME _____ DATE _____

TRACK EACH STEP

A percent is a part out of 100, so find the percent of the amount at that step. In a multi-step problem, finish one change before using the new amount for the next change.

WORKED EXAMPLE

A $150 jacket is 20% off. After the discount, 10% sales tax is added. What is the final price?

1. 20% of $150 = $30.
2. Discounted price: $150 - $30 = $120.
3. Tax: 10% of $120 = $12.
4. $120 + $12 = $132.

Answer: $132

PRACTICE 6 problems

1 A $56 hoodie is 25% off. Then 5% sales tax is added to the sale price. What is the final cost?

ANSWER _____

2 Red and white paint are mixed in a ratio of 3:4. If the total mixture is 49 ounces, how many ounces of each color are used?

ANSWER _____

3 A music plan costs $36 per month. Its price increases by 25%, then a coupon takes 1/5 off the new price. What is the final monthly cost?

ANSWER _____

4 A $70 backpack has a 15% coupon. Shipping costs $6 after the coupon is applied. What is the final cost?

ANSWER _____

5 A club has members in a ratio of 4 artists to 5 coders. There are 63 members total. If 1/4 of the artists are absent, how many artists attend?

ANSWER _____

6 A $45 music subscription is discounted by 40%, then 8% tax is added to the discounted price. What is the final cost?

ANSWER _____

APPLY IT Show your work

1 An esports club buys 8 tournament passes at $14 each. The organizer gives 25% off the total, then adds a 5% processing fee to the discounted total. What is the final cost?

WORK SPACE

ANSWER _____

2 A student council orders stickers in a ratio of 6 holographic stickers to 5 matte stickers. It orders 99 stickers total. Holographic stickers cost $2 each, and matte stickers cost $1 each. The printer takes 6% off the whole order. What is the final cost?

WORK SPACE

ANSWER _____

CHALLENGE One step up

An online store raises the price of a $56 headset by 25%, then reduces the new price by 25%. Is the final price the same as the original price? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Percent Price Paths

GRADE 7 · 7.PAR.4.9

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A $56 hoodie is 25% off. Then 5% sales tax is added to the sale price. What is the final cost?	**$44.10**
2	Red and white paint are mixed in a ratio of 3:4. If the total mixture is 49 ounces, how many ounces of each color are used?	**21 ounces red and 28 ounces white**
3	A music plan costs $36 per month. Its price increases by 25%, then a coupon takes 1/5 off the new price. What is the final monthly cost?	**$36**
4	A $70 backpack has a 15% coupon. Shipping costs $6 after the coupon is applied. What is the final cost?	**$65.50**
5	A club has members in a ratio of 4 artists to 5 coders. There are 63 members total. If 1/4 of the artists are absent, how many artists attend?	**21 artists**
6	A $45 music subscription is discounted by 40%, then 8% tax is added to the discounted price. What is the final cost?	**$29.16**

PART 2 · APPLY IT

1. **$88.20** The passes cost $112 before the discount. Subtract the $28 discount to get $84, then add a $4.20 processing fee.
2. **$143.82** There are 9 equal ratio groups, so the order has 54 holographic and 45 matte stickers for a cost of $153. The 6% discount is $9.18, so subtract it from $153.

CHALLENGE

No. The price rises to $70, then 25% of $70 is $17.50. The final price is $52.50, which is $3.50 less than the original price.

Accept equivalent money notation, such as $37.8 for $37.80 when applicable. For the challenge, accept explanations that show the second 25% is taken from the increased price.