Percent Power Moves

Practice finding percent changes, prices, and rates.

7.4.D · solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems; and

Name _____ Date _____

USE THE BASE FOR EACH STEP

For a percent increase or decrease, find that percent of the amount at the start of that step, then add or subtract it. To find the percent change between two amounts, divide the change by the amount before that change. For successive changes, the next step uses the updated amount as its base.

Worked example

A jacket's price rises from $32 to $40. What is the percent increase?

1. Find the change: 40 - 32 = 8.
2. Divide by the original price: 8 / 32 = 0.25.
3. Write the decimal as a percent: 0.25 = 25%.

25% increase

1. Practice

A $50 backpack price is increased by 10%. What is the new price?

2. Practice

Decrease $60 by 15%.

3. Practice

A number rises from 45 to 54. What is the percent increase?

4. Practice

A game controller costs $80 and is discounted 30%. What is the sale price?

5. Practice

You buy snacks that cost $12 before tax. Sales tax is 5%. What is the total cost?

6. Practice

A 6-pack of drinks costs $18. What is the unit price per drink?

7. Apply

A pair of headphones is marked $75. A store gives a 20% discount, then adds 6% sales tax to the discounted price. What is the final cost?

8. Apply

Maya earns $96 from pet sitting. She puts 15% of the money into savings, then spends $34 from what remains on a game. How much money does Maya have left?

9. Challenge

An annual gaming membership costs $200. Its price rises 15% one month and then falls 15% the next month. What is the final price? Explain why the final price is not the original price.

What to accept

Accept equivalent money notation, such as 55 dollars for $55, when the value is correct. For percent-change problems, students may use decimals or fractions if their final answer is correct.

1. Practice

$55

2. Practice

$51

3. Practice

20%

4. Practice

$56

5. Practice

$12.60

6. Practice

$3 per drink

7. Apply

$63.60

The discount is $15, so the discounted price is $60. Sales tax is $3.60, making the final cost $63.60.

8. Apply

$47.60

Maya saves $14.40, leaving $81.60. After spending $34, she has $47.60 left.

9. Challenge

The final price is $195.50. The price increases to $230, then 15% of $230 is $34.50, so subtracting gives $195.50.