LESSON MAKER PRO

Percent Change Quest

Estimate first, then find the exact percent change.

GRADE 8 · 8.CE.1.c

8.CE.1.c "Estimate and solve contextual problems that require the computation of the percent increase or decrease."

NAME _____ DATE _____

FIND THE CHANGE

Find the difference between the original amount and the new amount. Divide the difference by the original amount, then multiply by 100 to find the percent increase or decrease. For an estimate, round to nearby friendly numbers before you calculate.

WORKED EXAMPLE

A jacket price changes from $32 to $40. What is the percent increase?

1. Find the change: 40 - 32 = 8.
2. Divide by the original amount: 8 / 32 = 1/4.
3. Convert to a percent: 1/4 = 25%.

Answer: 25% increase

PRACTICE 6 problems

1 Estimate first. A notebook's price rises from $50 to $60. What is the percent increase?

ANSWER _____

2 Estimate first. The number of entries in an art contest rises from 30 to 45. What is the percent increase?

ANSWER _____

3 Estimate first. A phone case price drops from $50 to $35. What is the percent decrease?

ANSWER _____

4 Estimate first. A weekly step goal rises from 75 steps to 90 steps. What is the percent increase?

ANSWER _____

5 Estimate first. The rewards points needed for a game item drop from 70 points to 56 points. What is the percent decrease?

ANSWER _____

6 Estimate first. The amount of juice in a container drops from 200 mL to 140 mL. What is the percent decrease?

ANSWER _____

APPLY IT Show your work

1 An esports club had 120 students sign up for a tournament last year. This year, 180 students sign up. Estimate the percent increase, then find the exact percent increase.

WORK SPACE

ANSWER _____

2 A hoodie costs $60 before a sale. During the sale, it costs $42. Estimate the percent decrease, then find the exact percent decrease.

WORK SPACE

ANSWER _____

CHALLENGE One step up

The dance club's event budget rises from $100 to $130, then drops to $117. What is the overall percent increase or decrease from the original budget to the final budget? Explain which amount you used as the denominator.

WORK SPACE AND ANSWER

ANSWER KEY

Percent Change Quest

GRADE 8 · 8.CE.1.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Estimate first. A notebook's price rises from $50 to $60. What is the percent increase?	**Estimate: 20%. Exact: 20% increase.**
2	Estimate first. The number of entries in an art contest rises from 30 to 45. What is the percent increase?	**Estimate: 50%. Exact: 50% increase.**
3	Estimate first. A phone case price drops from $50 to $35. What is the percent decrease?	**Estimate: 30%. Exact: 30% decrease.**
4	Estimate first. A weekly step goal rises from 75 steps to 90 steps. What is the percent increase?	**Estimate: 20%. Exact: 20% increase.**
5	Estimate first. The rewards points needed for a game item drop from 70 points to 56 points. What is the percent decrease?	**Estimate: 20%. Exact: 20% decrease.**
6	Estimate first. The amount of juice in a container drops from 200 mL to 140 mL. What is the percent decrease?	**Estimate: 30%. Exact: 30% decrease.**

PART 2 · APPLY IT

1. **Estimate: 50%. Exact: 50% increase.** The increase is 60 students. Divide 60 by the original 120 to get 1/2, or 50%.
2. **Estimate: 30%. Exact: 30% decrease.** The price decreases by $18. Divide 18 by the original price of 60 to get 3/10, or 30%.

CHALLENGE

17% increase.

Accept reasonable benchmark estimates that are close to the exact percent. Require students to use the original amount as the denominator for each exact percent change.