

Find the Percent of a Number

Lesson 4-4

Name: _____

Date: _____

Class: _____

Key Vocabulary

Level 1 support

Picture first, then the word, then a plain-language meaning. Say each word out loud.

30% means 30 out of 100

Percent

A way to compare a number to 100, shown with the % sign.

In '25% of 80,' the base is 80

Base

The whole amount you take a percent of.

25% of 80 = 20; the part is 20

Part

The piece you get when you take a percent of a number.

part = percent × base

Equation

A math sentence with an equal sign showing both sides are the same.

\$40 shirt at 25% off: discount = \$10

Discount

Money taken off the first price to make it cheaper.

Key Ideas & Notes

- It's Discount Day at the arcade!
- Different games are offering percent-off deals on ticket prices.
- The claw machine is 25% off its usual 60-ticket price, and the racing game is 40% off 80 tickets.
- You need to calculate the discounts to figure out how many tickets each game actually costs!
- Find the percent of each number. Use the equation: $\text{Part} = \text{Percent} \times \text{Base}$. Convert the percent to a decimal first.

Think About It

- What information do you need to find the discount amount?
- How is finding 25% of 60 different from finding 40% of 80?
- Is there more than one way to find a percent of a number?

My Notes

Guided Examples

Example 1

What is 20% of 150?

Solution: $20\% = 0.20$. Multiply: $0.20 \times 150 = 30$.

Answer: A. 30

Example 2

What is 50% of 84?

Solution: $50\% = 0.50$. Multiply: $0.50 \times 84 = 42$. (Or simply divide by 2: $84 \div 2 = 42$.)

Answer: A. 42

Example 3

What is 10% of 320?

Solution: $10\% = 0.10$. Multiply: $0.10 \times 320 = 32$. (Or move the decimal one place left.)

Answer: A. 32

Write About the Math

The Writing Revolution

I can explain my steps using the words percent, base, part, and equation.

1. Kernel Sentence subject + verb

Model: Percent is a way to compare a number to 100, shown with the % sign.

Porcentaje es una manera de comparar un número con 100, con el signo %.

Write a kernel sentence about percent. Use a subject and a verb.

Escribe una oración base sobre porcentaje. Usa un sujeto y un verbo.

2. Sentence Expansion because · but · so

Kernel: Percent matters in math

Porcentaje importa en matemáticas

Expand the kernel three ways. Add a reason, a contrast, and a result.

because
porque

Percent matters in math because ____.

Porcentaje importa en matemáticas porque ____.

but
pero

Percent matters in math, but ____.

Porcentaje importa en matemáticas, pero ____.

so
entonces

Percent matters in math, so ____.

Porcentaje importa en matemáticas, entonces ____.

3. Sentence Types 4 ways to write a math idea

Statement
Afirmación

Tell one true fact about percent.
Di un hecho verdadero sobre percent.

Percent ____.

Question
Pregunta

Ask a question about percent.
Haz una pregunta sobre percent.

How does ____ ?

¿Cómo ____ ?

Exclamation
Exclamación

Show excitement about percent.
Muestra entusiasmo sobre percent.

Wow, ____ !

¡Guau, ____ !

Command
Mandato

Tell a partner what to do with percent.
Dile a un compañero qué hacer con percent.

First, ____ .

Primero, ____ .

4. Explain Your Reasoning use a sentence starter

I changed ____% **into** ____.

Cambié ____% *a* ____.

Then I multiplied by ____.

Luego multipliqué por ____.

I would do this to find ____.

Haría esto para hallar ____.

Try It

Solve on your own. Check the answer key when you are done.

1. An arcade prize costs 240 tickets. If you have a coupon for 15% off, how many tickets do you save?

- A. 36 tickets
- B. 24 tickets
- C. 15 tickets
- D. 204 tickets

Show your work:

2. A student scored 72 out of 90 on a test. What percent did they score?

- A. 80%
- B. 72%
- C. 75%
- D. 90%

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A class has 32 students. 25% are in the math club, 50% are in the reading club, and 12.5% are in both. How many students are in each group? Can the total of all three groups be more than 32? Explain why or why not.

Sentence starter: There are ___ in math club, ___ in reading club, and ___ in both. The total ___ be more than 32 because ___.

Show your work:

Reflect — Exit Ticket

What is 45% of 360?

- A. 162
- B. 145
- C. 180
- D. 126

Your answer:

Answer Key & Teacher Guide

1. **Try It 1:** A. 36 tickets — 15% of 240 = $0.15 \times 240 = 36$ tickets saved.
2. **Try It 2:** A. 80% — $72 \div 90 = 0.80 = 80\%$.
3. **Exit Ticket:** A. $162 - 45\% = 0.45$. Multiply: $0.45 \times 360 = 162$.

Writing (TWR) — what to look for

- **Kernel sentence:** A complete sentence needs a subject and a verb. Example: Percent is a way to compare a number to 100, shown with the % sign.
- **Expansion:** *because* gives a reason, *but* shows a contrast or exception, *so* shows a result. Answers vary; each must keep the kernel idea and add the correct kind of detail.
- **Sentence types:** Statement ends with a period, question with "?", exclamation with "!", and a command starts with an action verb (a "bossy" verb).