

Percent Power Play

Find a part or whole using rates per 100.

GRADE 6 • NY-6.RP.3.c

NY-6.RP.3.c "Find a percent of a quantity as a rate per 100. Solve problems that involve finding the whole given a part and the percent, and finding a part of a whole given the percent."

NAME _____

DATE _____

USE PERCENT RATES

A percent tells how many out of 100. To find a part, multiply the whole by the percent written as a fraction over 100. To find the whole, divide the part by the percent written as a fraction over 100.

WORKED EXAMPLE

Find 35% of 240.

1. $35\% = 30\% + 5\%$.
2. 30% of 240 is 72.
3. 5% of 240 is 12.
4. $72 + 12 = 84$.

Answer: 84

PRACTICE 6 problems

1 Find 25% of 64.

ANSWER _____

2 A game costs 90 coins. You use a coupon for 40% off. How many coins is the discount?

ANSWER _____

3 18 players are 20% of all the players in a tournament. How many players are in the tournament?

ANSWER _____

4 A video creator has earned 49 points, which is 70% of a goal. What is the total goal?

ANSWER _____

5 Find 16% of 150.

ANSWER _____

6 54 songs are 45% of a playlist. How many songs are in the full playlist?

ANSWER _____

APPLY IT Show your work

- 1** In a school game-design survey, 14% of 200 students chose puzzle games. How many students chose puzzle games?

WORK SPACE

ANSWER _____

- 2** At a school concert, 63 tickets were sold online. This was 45% of all tickets sold. How many tickets were sold altogether?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A coding club has finished 45 challenges, which is 25% of its planned total. The club then finishes another 10% of its planned total. How many challenges has the club finished now? Explain your reasoning.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find 25% of 64.	16
2	A game costs 90 coins. You use a coupon for 40% off. How many coins is the discount?	36 coins
3	18 players are 20% of all the players in a tournament. How many players are in the tournament?	90 players
4	A video creator has earned 49 points, which is 70% of a goal. What is the total goal?	70 points
5	Find 16% of 150.	24
6	54 songs are 45% of a playlist. How many songs are in the full playlist?	120 songs

PART 2 • APPLY IT

1. **28 students** Write 14% as $14/100$. Multiply 200 by $14/100$ to get 28.
2. **140 tickets** Write 45% as $45/100$. Divide 63 by $45/100$ to get 140.

CHALLENGE

The planned total is $45 \div (25/100) = 180$ challenges. Another 10% of 180 is 18 challenges, so the club has finished $45 + 18 = 63$ challenges.

Accept equivalent fraction, decimal, or benchmark-percent methods. For the challenge, accept any clear explanation that finds 180 as the whole, then adds 18 to 45.