

Spot the Pattern

Use repeated reasoning to solve and check.

GRADE 6 • 6.MP.8

6.MP.8 "Look for and express regularity in repeated reasoning."

NAME _____

DATE _____

THE BIG IDEA

When the same amount repeats, find one group and count the groups. Multiply to solve, then check with repeated addition.

WORKED EXAMPLE

A library cart holds 11 graphic novels on each shelf. It has 2 shelves. How many novels does it hold?

1. One shelf holds 11 novels.
2. Add equal groups: $11 + 11 = 22$.
3. Check: $11 \times 2 = 22$.

Answer: 22 graphic novels

PRACTICE 5 problems

- 1** A game awards 6 gems for each daily mission. Leo finishes 5 missions. How many gems does he earn? Show a multiplication check.

ANSWER _____

- 2** A music app adds 8 songs to a playlist each week. After 4 weeks, how many songs were added? Write the repeated addition you used.

ANSWER _____

- 3** At robotics club, each kit needs 7 batteries. The club prepares 6 kits. How many batteries are needed? Check with multiplication.

ANSWER _____

- 4** A snack stand puts 10 pretzels in each bag. It fills 4 bags. How many pretzels are packed? Show a check.

ANSWER _____

- 5** A runner completes 9 laps at each practice. Over 8 practices, how many laps does the runner complete? Check your pattern.

ANSWER _____

APPLY IT Show your work

- 1** A school store sells 15 keychains at each lunch. It sells keychains at 5 lunches. How many keychains does it sell? Explain how the total changes after each lunch.

WORK SPACE

ANSWER _____

- 2** A creator posts 13-second video clips. A montage uses 7 clips. How many seconds long is the montage? Use repeated reasoning to check.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A game character starts with 18 energy points and gains 6 points after each completed stage. After 9 stages, how many energy points does the character have? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A game awards 6 gems for each daily mission. Leo finishes 5 missions. How many gems does he earn? Show a multiplication check.	30 gems
2	A music app adds 8 songs to a playlist each week. After 4 weeks, how many songs were added? Write the repeated addition you used.	32 songs; $8 + 8 + 8 + 8 = 32$
3	At robotics club, each kit needs 7 batteries. The club prepares 6 kits. How many batteries are needed? Check with multiplication.	42 batteries
4	A snack stand puts 10 pretzels in each bag. It fills 4 bags. How many pretzels are packed? Show a check.	40 pretzels
5	A runner completes 9 laps at each practice. Over 8 practices, how many laps does the runner complete? Check your pattern.	72 laps

PART 2 • APPLY IT

1. **75 keychains** Each lunch adds 15 keychains. Multiply $15 \times 5 = 75$.
2. **91 seconds** Each clip adds 13 seconds. Multiply $13 \times 7 = 91$.

CHALLENGE

72 energy points; $18 + (9 \times 6) = 72$.

Accept multiplication or repeated addition as a check. For the challenge, accept an equivalent equation and a clear explanation that 6 points are added for each stage.