

Quantity Sense Quest

Grade 6: Represent situations, use units, and check meaning.

GRADES K-12 • Practice.MP2

CCSS.Math.Practice.MP2 "Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem situations..."

NAME _____

DATE _____

MAKE QUANTITIES MATTER

First, name what each number means and choose an equation that matches the situation. Then solve, include units, and check whether your answer makes sense in the real situation.

WORKED EXAMPLE

A club buys 8 packs with 5 badges in each pack. How many badges does the club buy?

1. Let x be the total number of badges.
2. Write $x = 8 \times 5$.
3. Multiply: $x = 40$.
4. The unit is badges, so the club buys 40 badges.

Answer: 40 badges

PRACTICE 6 problems

- 1** Three game tickets cost \$18 altogether. Write a division equation to find the cost of one ticket, then state the unit.

ANSWER _____

- 2** A running club travels 14 miles in 2 hours at a constant pace. Write an equation and find the rate in miles per hour.

ANSWER _____

- 3** The art team puts 13 stickers in each of 11 prize bags. Represent the total with an equation, then solve.

ANSWER _____

- 4** A refill station has 24 ounces of juice to pour equally into 4 bottles. Write a division equation and find how many ounces go in each bottle.

ANSWER _____

- 5** A music app costs \$9 each month for 10 months. Use multiplication to find the total cost.

ANSWER _____

- 6** A puzzle game has 31 quests. A player finishes 19 quests. Write a subtraction equation and find how many quests remain.

ANSWER _____

APPLY IT Show your work

- 1** At a school esports event, 9 teams each order 16 snack vouchers. The organizer has 150 vouchers. How many vouchers are left after the teams get their orders? Write an equation that shows both steps.

WORK SPACE

ANSWER _____

- 2** Jordan saves \$13 each week for 7 weeks to buy a headset. The headset costs \$22. How much money will Jordan have left after buying it? Show an equation.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A school club has 17 members. Each member needs 2 entry wristbands for a two-day event. Wristbands are sold only in packs of 6. How many packs must the club buy? Explain why rounding down does not work.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Three game tickets cost \$18 altogether. Write a division equation to find the cost of one ticket, then state the unit.	$18 \div 3 = 6$, so one ticket costs \$6.
2	A running club travels 14 miles in 2 hours at a constant pace. Write an equation and find the rate in miles per hour.	$14 \div 2 = 7$, so the rate is 7 miles per hour.
3	The art team puts 13 stickers in each of 11 prize bags. Represent the total with an equation, then solve.	$11 \times 13 = 143$, so there are 143 stickers.
4	A refill station has 24 ounces of juice to pour equally into 4 bottles. Write a division equation and find how many ounces go in each bottle.	$24 \div 4 = 6$, so each bottle gets 6 ounces.
5	A music app costs \$9 each month for 10 months. Use multiplication to find the total cost.	$9 \times 10 = 90$, so the total cost is \$90.
6	A puzzle game has 31 quests. A player finishes 19 quests. Write a subtraction equation and find how many quests remain.	$31 - 19 = 12$, so 12 quests remain.

PART 2 • APPLY IT

- 6 vouchers are left.** First find the vouchers ordered: $9 \times 16 = 144$. Then subtract from the supply: $150 - 144 = 6$.
- \$69 will be left.** Jordan saves $13 \times 7 = 91$ dollars. Then $91 - 22 = 69$ dollars remain.

CHALLENGE

6 packs. The club needs $17 \times 2 = 34$ wristbands. Five packs have only 30 wristbands, so the club must buy 6 packs, which provide 36 wristbands.

Accept equivalent equations, including multiplication written in either order. Students should include appropriate units and may explain their reasonableness checks in different correct ways.