LESSON MAKER PRO

Plan, Solve, Check

Use a clear plan to solve real-life math problems.

GRADE 7 · 7.MP.1

7.MP.1 "Make sense of problems and persevere in solving them."

NAME _____ DATE _____

MAKE A PLAN

First, decide what the question asks and which facts matter. Choose operations, show steps, then check with an inverse operation or an estimate. If your result does not make sense, revise your plan.

WORKED EXAMPLE

A student sells 14 keychains for $7 each and spends $19 on supplies. What is the profit?

1. Find money collected: 14 x 7 = 98.
2. Subtract the supply cost: 98 - 19 = 79.
3. Check: 79 + 19 = 98.

Answer: $79 profit

PRACTICE 5 problems

1 A player has 45 game points, loses 12 points, then earns 27 points. Choose operations, solve, and write a check.

ANSWER _____

2 A hoodie costs $24 and is 25% off. Choose operations, find the sale price, and check that the discount is reasonable.

ANSWER _____

3 At robotics club, 3/5 of 40 students choose the coding team. Choose operations, find the number of students, and check.

ANSWER _____

4 A runner completes 5 laps that are each 1.6 miles. Choose operations, find the total distance, and check with an estimate.

ANSWER _____

5 Nine friends share a $36 pizza bill equally. Choose operations, find each share, and check.

ANSWER _____

APPLY IT Show your work

1 The school esports club sells 3/4 of its 120 tournament tickets for $5 each. The club pays $128 for prizes. How much profit does the club make? Show a plan and a check.

WORK SPACE

ANSWER _____

2 A concert ticket costs $96. Jordan has saved 3/8 of the cost and earns $9.50 per hour for four hours helping a neighbor. How much more money does Jordan need? Show a plan and a check.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A gaming contest charges a $48 entry fee. A 25% discount applies to the entry fee, then a $6 service fee is added. Lee says the total is $40.50 because the discount should be taken after adding the service fee. Is Lee correct? Find the total and explain.

WORK SPACE AND ANSWER

ANSWER KEY

Plan, Solve, Check

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A player has 45 game points, loses 12 points, then earns 27 points. Choose operations, solve, and write a check.	**60 points; check: 60 - 27 + 12 = 45.**
2	A hoodie costs $24 and is 25% off. Choose operations, find the sale price, and check that the discount is reasonable.	**$18; check: 25% of $24 is $6, and $24 - $6 = $18.**
3	At robotics club, 3/5 of 40 students choose the coding team. Choose operations, find the number of students, and check.	**24 students; check: 24/40 = 3/5.**
4	A runner completes 5 laps that are each 1.6 miles. Choose operations, find the total distance, and check with an estimate.	**8 miles; check: 5 x about 2 miles is about 10 miles, so 8 miles is reasonable.**
5	Nine friends share a $36 pizza bill equally. Choose operations, find each share, and check.	**$4 each; check: 9 x $4 = $36.**

PART 2 · APPLY IT

1. **$322 profit** First find tickets sold: 3/4 x 120 = 90. Revenue is 90 x $5 = $450, and $450 - $128 = $322; check: $322 + $128 = $450.
2. **$22** Jordan saved 3/8 x $96 = $36 and earns 4 x $9.50 = $38, for $74 total. Since $96 - $74 = $22, the check is $74 + $22 = $96.

CHALLENGE

Lee is not correct. The discount applies only to $48: 25% of $48 is $12, so $48 - $12 + $6 = $42. The service fee is added after the discount.

Accept equivalent check statements and correct equations. For the challenge, students must show that the discount is applied before the service fee is added.