LESSON MAKER PRO

Plan Solve Check

Use models, equations, and checks to solve everyday problems.

GRADE 6 · TEKS 6.1

6.1 "Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: apply mathematics to problems arising in everyday life, society, and the workplace..."

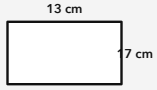
NAME _____ DATE _____

A SMART PROBLEM-SOLVING PATH

First, identify what you need to find and choose a plan. Use an equation, table, or diagram to organize your work. Then check whether your answer is reasonable by estimating or using an inverse operation.

WORKED EXAMPLE

A club orders fabric for the rectangular banner shown. Fabric costs $0.04 per square centimeter. What is the fabric cost?



1. Plan: Find the banner's area, then find the cost.
2. Area = 13 x 17 = 221 cm2.
3. Cost = 221 x $0.04 = $8.84. A cost near $11 is reasonable because $0.04 is close to $0.05.

Answer: $8.84

PRACTICE 4 problems

1 An arcade card has $25. Each game costs $3. After 6 games, how much money remains? Write an equation and a check.

ANSWER _____

2 A student has an 18-km walking goal. She walks 5 km on Monday and 7 km on Tuesday. How many kilometers are left? Show an equation and a check.

ANSWER _____

3 A robotics team needs 36 batteries. Packs hold 8 batteries and cost $6 each. How many packs should the team buy, and what will it pay? Show a check.

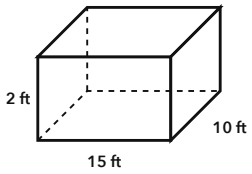
ANSWER _____

4 A music app charges $15 for 3 months. At the same rate, what is the cost for 8 months? Show a ratio or equation and a check.

ANSWER _____

APPLY IT Show your work

1 Use the raised garden bed shown. It must be filled completely. Soil comes in 30-cubic-foot bags for $11 each. How many bags are needed, and what is the total cost? Explain how you checked.



ANSWER _____

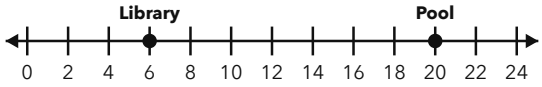
2 Use the bar graph. The snack booth has a $200 earning goal. How much did it earn altogether, and how much more does it need? Show how you checked your total.



ANSWER _____

CHALLENGE One step up

The number line shows two places on a trail. Kai starts at Library, rides to Pool, then rides 3/7 of that trip back toward Library. How far is Kai from Library? Explain how you checked.



WORK SPACE AND ANSWER

ANSWER KEY

Plan Solve Check

GRADE 6 · TEKS 6.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	An arcade card has $25. Each game costs $3. After 6 games, how much money remains? Write an equation and a check.	**25 - 3(6) = 7. Check: 3 x 6 = 18, and 25 - 18 = 7.**
2	A student has an 18-km walking goal. She walks 5 km on Monday and 7 km on Tuesday. How many kilometers are left? Show an equation and a check.	**18 - 5 - 7 = 6 km. Check: 5 + 7 + 6 = 18.**
3	A robotics team needs 36 batteries. Packs hold 8 batteries and cost $6 each. How many packs should the team buy, and what will it pay? Show a check.	**5 packs, $30. Check: 5 x 8 = 40 batteries, which is enough for 36.**
4	A music app charges $15 for 3 months. At the same rate, what is the cost for 8 months? Show a ratio or equation and a check.	**$40. Check: $15 / 3 = $5 per month, and 8 x $5 = $40.**

PART 2 · APPLY IT

1. **10 bags, $110. Check: 15 x 10 x 2 = 300 ft3, and 300 / 30 = 10 bags.** Find the bed volume, 15 x 10 x 2 = 300 cubic feet. Divide by 30 cubic feet per bag, then multiply 10 bags by $11.
2. **$150 altogether, $50 more needed. Check: 35 + 42 + 28 + 45 = 150, and 150 + 50 = 200.** Add the four bar values to find $150. Subtract $150 from the $200 goal.

CHALLENGE

8 km. Library to Pool is 20 - 6 = 14 km. Kai rides back 3/7 x 14 = 6 km, so he is 14 - 6 = 8 km from Library. Check: 8 + 6 = 14 km.

Accept equivalent equations, organized tables, or labeled diagrams. Accept any valid estimate, inverse-operation check, or addition check that supports the answer.