LESSON MAKER PRO

Pick the Best Tool

Choose a tool, solve, and check.

GRADE 8 · 8.MP.5

8.MP.5 "Use appropriate tools strategically."

NAME _____ DATE _____

TOOL CHOICE MATTERS

Before calculating, decide which tool shows the situation best. An equation can show an unknown, a table can compare choices, and an estimate can check whether an answer makes sense.

WORKED EXAMPLE

The art club orders 5 paint sets for $9 each. Which tool is useful, and what is the total cost?

1. Use multiplication because each set has the same cost.
2. Write 5 x 9.
3. Compute 45.

Answer: A multiplication expression is useful. The total is $45.

PRACTICE 5 problems

1 A game store charges $3 for each of 4 tournament entries and a $2 registration fee. Choose a tool. What is the total cost?

ANSWER _____

2 Twenty-eight students form equal coding teams of 4. Choose a tool. How many teams are made?

ANSWER _____

3 A phone has 64 GB free. It saves files using 17 GB, 12 GB, and 8 GB. Choose a tool. How much space remains?

ANSWER _____

4 A runner completes 6 laps of 3/4 mile each. Choose a tool. How far does the runner go?

ANSWER _____

5 A student wants $114 after buying $12 of supplies. They earn $18 per lawn job. Choose a tool. How many jobs are needed?

ANSWER _____

APPLY IT Show your work

1 A music app offers Plan A, $6 plus $1.50 per song, or Plan B, $12 plus $0.75 per song. Use a table or equations. At how many songs are the plans equal? Which plan costs less for 12 songs?

WORK SPACE

ANSWER _____

2 You have $24 saved for earbuds costing $84. You earn $10 per complete dog-walking job and spend $6 on snacks before buying the earbuds. Use an inequality. What is the minimum whole number of jobs needed?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Bus rides cost $2.50 each. A discount card costs $15 plus $1.25 per ride. At how many rides do both choices cost the same? Explain your tool and check your answer.

WORK SPACE AND ANSWER

ANSWER KEY

Pick the Best Tool

GRADE 8 · 8.MP.5

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A game store charges $3 for each of 4 tournament entries and a $2 registration fee. Choose a tool. What is the total cost?	**A numerical expression is useful: 4 x 3 + 2 = 14. Total cost: $14.**
2	Twenty-eight students form equal coding teams of 4. Choose a tool. How many teams are made?	**Division is useful: 28 / 4 = 7. There are 7 teams.**
3	A phone has 64 GB free. It saves files using 17 GB, 12 GB, and 8 GB. Choose a tool. How much space remains?	**A list and subtraction are useful: 64 - 17 - 12 - 8 = 27. The phone has 27 GB free.**
4	A runner completes 6 laps of 3/4 mile each. Choose a tool. How far does the runner go?	**Multiplication is useful: 6 x 3/4 = 18/4 = 4 1/2. The runner goes 4 1/2 miles.**
5	A student wants $114 after buying $12 of supplies. They earn $18 per lawn job. Choose a tool. How many jobs are needed?	**An equation is useful: 18x - 12 = 114, so x = 7. The student needs 7 jobs.**

PART 2 · APPLY IT

1. **The plans are equal at 8 songs. Plan B costs less for 12 songs.** Set 6 + 1.50x equal to 12 + 0.75x to get x = 8. For 12 songs, Plan A costs $24 and Plan B costs $21.
2. **7 complete jobs** Write 24 + 10x - 6 >= 84. Then 10x >= 66, so x >= 6.6. Because jobs are whole, at least 7 are needed. Six jobs leave $78, which is too little; seven leave $88, which covers $84.

CHALLENGE

12 rides. Use an equation: 2.50x = 15 + 1.25x, so 1.25x = 15 and x = 12. Check: both choices cost $30.

Accept equivalent equations, tables, or organized lists when they correctly model the situation. Accept 4 1/2 or 9/2 miles for problem 4.