LESSON MAKER PRO

Math Pattern Power

Use number structure to plan, solve, and check.

GRADE 5 · 5.MP.7

5.MP.7 "Look for and make use of structure."

NAME _____ DATE _____

SPOT HELPFUL STRUCTURE

Look for equal groups, friendly numbers, or parts you can combine. Break a hard calculation into easier pieces, then check whether your answer fits the situation.

WORKED EXAMPLE

A book fair packs 23 bookmarks into each of 4 prize boxes. How many bookmarks are packed?

1. See 4 equal groups of 23.
2. Break 23 into 20 + 3.
3. Multiply: 4 x 20 = 80 and 4 x 3 = 12.
4. Add: 80 + 12 = 92. Check: 92 / 4 = 23.

Answer: 92 bookmarks

PRACTICE 6 problems

1 At a school concert, 6 rows have 5 empty seats each. Use equal groups to find the number of empty seats. Show a quick check.

ANSWER _____

2 Library volunteers place 15 comics on each of 11 display shelves. Break apart a number to find the total number of comics, then check your answer.

ANSWER _____

3 A runner practices 2 laps each day for 14 days. Use the structure of two equal weeks to find the total number of laps. Check your answer.

ANSWER _____

4 Six art teams each need 25 beads for a project. Use a helpful number pattern to find how many beads are needed altogether. Check whether your answer is reasonable.

ANSWER _____

5 A game costs 5 tickets per round. Jordan plays 18 rounds. Use a nearby friendly number to find how many tickets Jordan spends. Check your answer.

ANSWER _____

6 The garden club gives 7 seeds to each of 16 students. How many seeds does the club give out? Explain how splitting 16 into two equal groups helps.

ANSWER _____

APPLY IT Show your work

1 Seven teams pack 16 snack bags each for a school event. Each snack bag has 5 items. The club also gets 13 extra items donated. How many items are available altogether? Use structure to make a plan, then check whether your total makes sense.

WORK SPACE

ANSWER _____

2 Kai saves $6 each week for 13 weeks to buy a game accessory. Kai then spends $17 from the savings. How much money is left? Break apart the calculation in a helpful way and check your result.

WORK SPACE

ANSWER _____

CHALLENGE One step up

At a school fair, 11 booths prepare 17 prize bags each. Each prize bag has 2 tickets. Before the fair begins, 26 tickets are donated to another event. How many tickets remain? Explain a structure you used to solve the problem.

WORK SPACE AND ANSWER

ANSWER KEY

Math Pattern Power

GRADE 5 · 5.MP.7

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	At a school concert, 6 rows have 5 empty seats each. Use equal groups to find the number of empty seats. Show a quick check.	**30 empty seats**
2	Library volunteers place 15 comics on each of 11 display shelves. Break apart a number to find the total number of comics, then check your answer.	**165 comics**
3	A runner practices 2 laps each day for 14 days. Use the structure of two equal weeks to find the total number of laps. Check your answer.	**28 laps**
4	Six art teams each need 25 beads for a project. Use a helpful number pattern to find how many beads are needed altogether. Check whether your answer is reasonable.	**150 beads**
5	A game costs 5 tickets per round. Jordan plays 18 rounds. Use a nearby friendly number to find how many tickets Jordan spends. Check your answer.	**90 tickets**
6	The garden club gives 7 seeds to each of 16 students. How many seeds does the club give out? Explain how splitting 16 into two equal groups helps.	**112 seeds. Splitting 16 into 8 + 8 gives 56 + 56 = 112.**

PART 2 · APPLY IT

1. **573 items** Find 7 x 16 x 5 = 560 items in the snack bags. Add the 13 donated items to get 573.
2. **$61** Multiply 13 x 6 = 78, then subtract 17. Kai has $61 left.

CHALLENGE

348 tickets. I found 17 x 2 = 34 tickets per booth, then 34 x 11 = 374, and 374 - 26 = 348.

Accept equivalent equations, decompositions, and checking methods. For explanation items, accept any clear use of equal groups, breaking apart numbers, or a nearby friendly number that leads to the correct result.