LESSON MAKER PRO

Pattern Power Plans

Use number patterns and equal groups to solve smarter.

GRADE 3 · 3.MP.7

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

NAME _____ DATE _____

SPOT THE STRUCTURE

When you see equal groups or a number pattern, look for parts you already know. You can break numbers into friendly parts, make a ten, or repeat the same change. Check that your parts still match the story.

WORKED EXAMPLE

A teacher puts 7 star stamps in each of 4 rows on a reward chart. How many stamps are on the chart?

1. See 4 equal rows of 7 stamps.
2. Split the 4 rows into 2 rows and 2 rows.
3. Each part has 2 x 7 = 14 stamps.
4. Add the parts: 14 + 14 = 28.

Answer: 28 stamps

PRACTICE 6 problems

1 A bakery puts 6 muffins on each of 3 trays. How many muffins are on the trays? Show the equal groups with an equation.

ANSWER _____

2 A toy store puts 8 action figures in each of 5 display bins. Use the fact that 5 is half of 10 to find the total number of action figures.

ANSWER _____

3 A gardener plants 3 flowers in each of 9 pots. How many flowers does the gardener plant? Use a multiplication fact to check your answer.

ANSWER _____

4 Ava reads 19 pages on Monday and 21 pages on Tuesday. How many pages does she read altogether? Use the numbers around 20 to help you.

ANSWER _____

5 An art club makes bead packets with 12, 15, 18, ___, ___ beads. Each new packet has 3 more beads than the packet before it. Write the next two numbers.

ANSWER _____

6 A sticker album has 54 stickers placed equally on 6 pages. How many stickers are on each page? Use a multiplication fact to check.

ANSWER _____

APPLY IT Show your work

1 At a field day, 6 teams each earn 9 points for finishing a relay. How many points do the teams earn altogether? Show how you can use 10 groups and take away 1 group.

WORK SPACE

ANSWER _____

2 At a game booth, Jada has 18 prize tickets and earns 22 more tickets. Each prize costs 5 tickets. How many prizes can Jada get? Show how making a friendly total helps.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A school theater has 11 rows of 8 seats. The first 3 rows are saved for performers' families. How many seats are not saved? Use an equation and a sentence to explain how you used the row structure.

WORK SPACE AND ANSWER

ANSWER KEY

Pattern Power Plans

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A bakery puts 6 muffins on each of 3 trays. How many muffins are on the trays? Show the equal groups with an equation.	**18 muffins; 3 x 6 = 18.**
2	A toy store puts 8 action figures in each of 5 display bins. Use the fact that 5 is half of 10 to find the total number of action figures.	**40 action figures; 10 x 8 = 80, and half of 80 is 40.**
3	A gardener plants 3 flowers in each of 9 pots. How many flowers does the gardener plant? Use a multiplication fact to check your answer.	**27 flowers; 9 x 3 = 27.**
4	Ava reads 19 pages on Monday and 21 pages on Tuesday. How many pages does she read altogether? Use the numbers around 20 to help you.	**40 pages; 19 + 21 = 20 + 20 = 40.**
5	An art club makes bead packets with 12, 15, 18, ___, ___ beads. Each new packet has 3 more beads than the packet before it. Write the next two numbers.	**21, 24**
6	A sticker album has 54 stickers placed equally on 6 pages. How many stickers are on each page? Use a multiplication fact to check.	**9 stickers on each page; 6 x 9 = 54.**

PART 2 · APPLY IT

1. **54 points** 6 x 9 = 6 x (10 - 1) = 60 - 6 = 54. Find 6 groups of 10, then subtract 1 group of 6. This gives 60 - 6 = 54.
2. **8 prizes** 18 + 22 = 40, and 40 / 5 = 8. Combine 18 and 22 to make 40 tickets. Then divide 40 tickets into groups of 5.

CHALLENGE

64 seats. I split 11 rows into 10 rows and 1 row: (10 x 8) + (1 x 8) = 88, and 3 x 8 = 24, so 88 - 24 = 64.

Accept equivalent equations, drawings of equal groups, or correct number decompositions that match each story. For the pattern item, accept 21 and 24 in either comma-separated or sentence form.