

Group It Out

Use arrays, equal groups, and sharing to solve.

GRADE 3 • NY-3.OA.3

NY-3.OA.3 "Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities."

NAME _____

DATE _____

EQUAL GROUPS AND ARRAYS

An array has objects in rows and columns. Each row has the same number of objects, and each column has the same number of objects. Multiply to find a total in equal groups, or divide to find the number in each group or the number of groups.

WORKED EXAMPLE

How many dots are in the array?

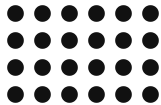


1. Count 3 rows.
2. Count 7 dots in each row.
3. Multiply: $3 \times 7 = 21$.

Answer: 21

PRACTICE 6 problems

- 1** How many dots are in the array?



ANSWER _____

- 2** How many dots are in the array?



ANSWER _____

- 3** 54 shells are shared equally among 6 buckets. How many shells are in each bucket?

ANSWER _____

- 4** There are 9 rows of 8 chairs in the school gym. How many chairs are there?

ANSWER _____

- 5** 64 crayons are put equally into 8 boxes. How many crayons are in each box?

ANSWER _____

- 6** A librarian places 9 books on each of 5 shelves. How many books are on the shelves?

ANSWER _____

APPLY IT Show your work

- 1** A craft club has 72 inches of ribbon. The club cuts the ribbon into pieces that are 9 inches long. How many ribbon pieces can the club cut?

WORK SPACE

ANSWER _____

- 2** The table shows points earned by teams at an arcade event. How many points did all the teams earn?

ARCADE EVENT POINTS

Team	Points
Comets	8
Tigers	8
Rockets	8
Otters	8
Falcons	8
Sharks	8

ANSWER _____

CHALLENGE One step up

Look at the tape. The cards are packed into equal packs. Each album page holds 4 packs. How many album pages are needed for all the packs? Explain your reasoning.

Card packs

10	10	10	10	10	10	10	10
----	----	----	----	----	----	----	----

 80 cards

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	How many dots are in the array?	24
2	How many dots are in the array?	40
3	54 shells are shared equally among 6 buckets. How many shells are in each bucket?	9
4	There are 9 rows of 8 chairs in the school gym. How many chairs are there?	72
5	64 crayons are put equally into 8 boxes. How many crayons are in each box?	8
6	A librarian places 9 books on each of 5 shelves. How many books are on the shelves?	45

PART 2 • APPLY IT

1. **8** Divide the total ribbon length by the length of each piece: $72 \div 9 = 8$.
2. **48** There are 6 teams with 8 points each. Multiply: $6 \times 8 = 48$.

CHALLENGE

2 pages. There are 8 packs of 10 cards. Since each page holds 4 packs, $8 \div 4 = 2$.

Accept multiplication or division equations that match each situation. For the challenge, accept any clear explanation that identifies 8 packs and divides them into groups of 4.