Repeated Addition with Arrays

Name: _____	Date: _____	Score: _____ / 24

Quick Review

To find the **total** number of objects in an array, you can use **repeated addition**. Since every row has the same number, add that number once for each row. For example, an array with 3 rows of 5 has a total of $5 + 5 + 5 = 15$. You can also add by columns — add the number in each column once for every column. Either way, equal groups added together give the same total. Repeated addition is a fast way to count an array.

◇ **Example:** An array has 4 rows of 3. Use repeated addition to find the total.
⇒ There are 4 rows, and each row has 3 objects. So we add 3 once for each row: $3 + 3 + 3 + 3$. Let's add step by step: $3 + 3 = 6$, then $6 + 3 = 9$, then $9 + 3 = 12$. The array has 12 objects in all.

Answer: $3 + 3 + 3 + 3 = 12$

PRACTICE

Use repeated addition to find each array total.

1. An array has 3 rows of 5. How many in all? _____
2. An array has 2 rows of 4. How many in all? _____
3. An array has 4 rows of 2. How many in all? _____
4. An array has 5 rows of 2. How many in all? _____
5. An array has 3 rows of 3. How many in all? _____
6. An array has 2 rows of 6. How many in all? _____
7. An array has 4 rows of 4. How many in all? _____
8. An array has 5 rows of 3. How many in all? _____
9. An array has 2 rows of 5. How many in all? _____
10. An array has 3 rows of 4. How many in all? _____
11. An array has 5 rows of 4. How many in all? _____
12. An array has 2 rows of 2. How many in all? _____
13. An array has 4 rows of 5. How many in all? _____
14. An array has 3 rows of 6. How many in all? _____
15. An array has 5 rows of 5. How many in all? _____
16. Write the repeated addition for 2 rows of 7. _____
17. Write the repeated addition for 3 rows of 2. _____
18. An array has 4 rows of 3. How many in all? _____
19. An array has 2 rows of 8. How many in all? _____
20. An array has 5 rows of 1. How many in all? _____

♦ Word Problems

21. A muffin tray has 3 rows of muffins with 4 muffins in each row. How many muffins are on the tray in all? _____
22. Mia plants flowers in 5 rows with 5 flowers in each row. How many flowers did she plant? _____
23. A parking lot has 4 rows of cars with 6 cars in each row. How many cars are parked in all? _____
24. A window has 2 rows of panes with 3 panes in each row. Use repeated addition to find the total number of panes. _____

Answer Keys

1. 15	**13.** 20
2. 8	**14.** 18
3. 8	**15.** 25
4. 10	**16.** $7+7$
5. 9	**17.** $2+2+2$
6. 12	**18.** 12
7. 16	**19.** 16
8. 15	**20.** 5
9. 10	**21.** 12 muffins
10. 12	**22.** 25 flowers
11. 20	**23.** 24 cars
12. 4	**24.** 6 panes

Step-by-Step Explanations

1. Add $5+5+5=15$.
2. Add $4+4=8$.
3. Add $2+2+2+2=8$.
4. Add $2+2+2+2+2=10$.
5. Add $3+3+3=9$.
6. Add $6+6=12$.
7. Add $4+4+4+4=16$.
8. Add $3+3+3+3+3=15$.
9. Add $5+5=10$.
10. Add $4+4+4=12$.
11. Add $4+4+4+4+4=20$.
12. Add $2+2=4$.
13. Add $5+5+5+5=20$.
14. Add $6+6+6=18$.
15. Add $5+5+5+5+5=25$.
16. Two rows of 7 means $7+7$, which equals 14.
17. Three rows of 2 means $2+2+2$, which equals 6.
18. Add $3+3+3+3=12$.
19. Add $8+8=16$.
20. Add $1+1+1+1+1=5$.
21. Add a 4 for each of the 3 rows: $4+4+4=12$ muffins.
22. Add a 5 for each of the 5 rows: $5+5+5+5+5=25$ flowers.
23. Add a 6 for each of the 4 rows: $6+6+6+6=24$ cars.
24. Add a 3 for each of the 2 rows: $3+3=6$ panes.

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