

Repeated Addition with Arrays

Name: _____

Date: _____

Score: _____ / 24

Q 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. <input type="text" value="15"/> | 13. <input type="text" value="20"/> |
| 2. <input type="text" value="8"/> | 14. <input type="text" value="18"/> |
| 3. <input type="text" value="8"/> | 15. <input type="text" value="25"/> |
| 4. <input type="text" value="10"/> | 16. <input type="text" value="7 + 7"/> |
| 5. <input type="text" value="9"/> | 17. <input type="text" value="2 + 2 + 2"/> |
| 6. <input type="text" value="12"/> | 18. <input type="text" value="12"/> |
| 7. <input type="text" value="16"/> | 19. <input type="text" value="16"/> |
| 8. <input type="text" value="15"/> | 20. <input type="text" value="5"/> |
| 9. <input type="text" value="10"/> | 21. <input type="text" value="12 muffins"/> |
| 10. <input type="text" value="12"/> | 22. <input type="text" value="25 flowers"/> |
| 11. <input type="text" value="20"/> | 23. <input type="text" value="24 cars"/> |
| 12. <input type="text" value="4"/> | 24. <input type="text" value="6 panes"/> |

Step-by-Step Explanations

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



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