

KS1 Maths Quiz - Year 2 Calculation - Multiplication (Mental Methods) (Questions)

This quiz addresses the requirements of the National Curriculum KS1 Maths and Numeracy for children aged 6 and 7 in year 2. Specifically this quiz is aimed at the section dealing with using mental methods for multiplication.

Understanding the process of multiplication can be quite a tricky challenge for some children. An introduction to this number operation will usually show that multiplication is, in fact, repeated addition. For example, the calculation of 3×4 is the same as $3 + 3 + 3 + 3$ or $4 + 4 + 4$. They are then encouraged to use mental methods to solve multiplication problems by using the number facts they have learned, for example if $3 + 3 + 3 = 9$ then $3 \times 3 = 9$. This is closely related to the mental methods Year 2 children learn to solve division problems.

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|---|---|
| <p>1. Which calculation 'family' would be most appropriate to describe 15 cakes?</p> <p><input type="checkbox"/> $3 \times 4 = 12$ $4 \times 3 = 12$ $3 + 3 + 3 + 3 = 12$ $4 + 4 + 4 = 12$</p> <p><input type="checkbox"/> $3 \times 5 = 15$ $5 \times 3 = 15$ $3 + 3 + 3 + 3 + 3 = 15$ $5 + 5 + 5 = 15$</p> <p><input type="checkbox"/> $5 \times 4 = 20$ $4 \times 5 = 20$ $4 + 4 + 4 + 4 = 20$ $5 + 5 + 5 + 5 = 20$</p> <p><input type="checkbox"/> $6 \times 4 = 24$ $4 \times 6 = 24$ $4 + 4 + 4 + 4 + 4 + 4 = 24$ $6 + 6 + 6 + 6 = 24$</p> | <p>2. Which of the following calculations is correct?</p> <p><input type="checkbox"/> $4 \times 4 = 16$ <input type="checkbox"/> $4 + 4 + 4 = 16$ <input type="checkbox"/> $3 = 4 = 16$ <input type="checkbox"/> $4 + 4 + 4 + 4 + 4 = 16$</p> |
| <p>3. If 2 hands = 10 fingers, how many fingers will 6 hands be?</p> <p><input type="checkbox"/> 30 because $6 \times 10 = 30$ <input type="checkbox"/> 30 because $3 \times 10 = 30$ <input type="checkbox"/> 30 because $6 \times 2 = 30$ <input type="checkbox"/> 30 because $2 \times 6 = 30$</p> | <p>4. Jane makes rows of sweets. She puts 5 sweets in each row. If she makes 4 rows, how many sweets will she use?</p> <p><input type="checkbox"/> 45 because $4 \times 5 = 45$ <input type="checkbox"/> 54 because $5 \times 4 = 54$ <input type="checkbox"/> 25 because $5 \times 5 = 25$ <input type="checkbox"/> 20 because 5×4 or $4 \times 5 = 20$</p> |
| <p>5. What are three lots of four?</p> <p><input type="checkbox"/> $4 + 3 = 12$ <input type="checkbox"/> $3 + 3 = 12$ <input type="checkbox"/> $3 \times 4 = 12$ <input type="checkbox"/> $3 \times 3 = 12$</p> | <p>6. Pizzas are cut into 8 slices. Which calculations show how many slices there would be if there were 3 pizzas?</p> <p><input type="checkbox"/> $3 \times 8 = 24$ $8 \times 3 = 24$ $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 24$ $8 + 8 + 8 = 24$</p> <p><input type="checkbox"/> $2 \times 4 = 8$ $4 \times 2 = 8$ $4 + 4 = 8$ $2 + 2 + 2 + 2 = 8$</p> <p><input type="checkbox"/> $2 \times 8 = 16$ $8 \times 2 = 16$ $2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 16$ $8 + 8 = 16$</p> <p><input type="checkbox"/> $4 \times 8 = 32$ $8 \times 4 = 32$ $8 + 8 + 8 + 8 = 32$ $4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 32$</p> |

7. Which of the following calculations is correct?

- $4 \times 3 = 12$
- $3 \times 3 = 12$
- $2 \times 4 = 12$
- $4 \times 4 \times 4 = 12$

8. $2 \times 3 = 6$ so:

- $3 \times 3 = 6$
- $2 + 3 = 6$
- $3 + 2 = 6$
- $3 \times 2 = 6$

9. $2 + 2 + 2 + 2$ is the same as:

- 4×4
- 2×2
- 4×2
- $2 \times 2 \times 2 \times 2$

10. Which of the following calculations is incorrect?

- $2 \times 6 = 12$
- $6 \times 2 = 12$
- $2 + 2 + 2 + 2 + 2 + 2 = 12$
- $4 \times 4 = 12$

KS1 Maths Quiz - Year 2 Calculation - Multiplication (Mental Methods) (Answers)

1. Which calculation 'family' would be most appropriate to describe 15 cakes?

- $3 \times 4 = 12$
 $4 \times 3 = 12$
 $3 + 3 + 3 + 3 = 12$
 $4 + 4 + 4 = 12$
- $3 \times 5 = 15$
 $5 \times 3 = 15$
 $3 + 3 + 3 + 3 + 3 = 15$
 $5 + 5 + 5 = 15$
- $5 \times 4 = 20$
 $4 \times 5 = 20$
 $4 + 4 + 4 + 4 = 20$
 $5 + 5 + 5 + 5 = 20$
- $6 \times 4 = 24$
 $4 \times 6 = 24$
 $4 + 4 + 4 + 4 + 4 + 4 = 24$
 $6 + 6 + 6 + 6 = 24$

15 cakes could be arranged in 3 rows of 5, or 5 rows of 3

3. If 2 hands = 10 fingers, how many fingers will 6 hands be?

- 30 because $6 \times 10 = 30$
- 30 because $3 \times 10 = 30$
- 30 because $6 \times 2 = 30$
- 30 because $2 \times 6 = 30$

$10 + 10 + 10 = 30$, this is the same as 3×10

2. Which of the following calculations is correct?

- $4 \times 4 = 16$
- $4 + 4 + 4 = 16$
- $3 \times 4 = 16$
- $4 + 4 + 4 + 4 + 4 = 16$

4×4 is the same as $4 + 4 + 4 + 4 = 16$

4. Jane makes rows of sweets. She puts 5 sweets in each row.

If she makes 4 rows, how many sweets will she use?

- 45 because $4 \times 5 = 45$
- 54 because $5 \times 4 = 54$
- 25 because $5 \times 5 = 25$
- 20 because 5×4 or $4 \times 5 = 20$

This is the same as $5 + 5 + 5 + 5$

5. What are three lots of four?

- $4 + 3 = 12$
- $3 + 3 = 12$
- $3 \times 4 = 12$
- $3 \times 3 = 12$

This is the same as $4 + 4 + 4$ or $3 + 3 + 3 + 3$

6. Pizzas are cut into 8 slices. Which calculations show how many slices there would be if there were 3 pizzas?

- $3 \times 8 = 24$
- $8 \times 3 = 24$
- $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 24$
- $8 + 8 + 8 = 24$
- $2 \times 4 = 8$
- $4 \times 2 = 8$
- $4 + 4 = 8$
- $2 + 2 + 2 + 2 = 8$
- $2 \times 8 = 16$
- $8 \times 2 = 16$
- $2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 16$
- $8 + 8 = 16$
- $4 \times 8 = 32$
- $8 \times 4 = 32$
- $8 + 8 + 8 + 8 = 32$
- $4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 32$

If each pizza has 8 slices, and there are 3 pizzas, this is the same as 8×3 or 3×8

7. Which of the following calculations is correct?

- $4 \times 3 = 12$
- $3 \times 3 = 12$
- $2 \times 4 = 12$
- $4 \times 4 \times 4 = 12$

3×4 , $3 + 3 + 3 + 3$ and $4 + 4 + 4$ would also give the same answer

8. $2 \times 3 = 6$ so:

- $3 \times 3 = 6$
- $2 + 3 = 6$
- $3 + 2 = 6$
- $3 \times 2 = 6$

The smaller numbers in a multiplication can go in either order

9. $2 + 2 + 2 + 2$ is the same as:

- 4×4
- 2×2
- 4×2
- $2 \times 2 \times 2 \times 2$

Multiplication is the same as repeated addition

10. Which of the following calculations is incorrect?

- $2 \times 6 = 12$
- $6 \times 2 = 12$
- $2 + 2 + 2 + 2 + 2 + 2 = 12$
- $4 \times 4 = 12$

All the others show some of the different ways 12 can be made