

BIDMAS

KS3 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Calculate $10 - 2 \times 3 + 1$

Step 1 · Multiplication first (BIDMAS: M before A or S)

$$2 \times 3 = 6$$

Step 2 · Now work left to right: subtraction before addition?

No — left to right: $10 - 6 = 4$

Step 3 · Then addition

$$4 + 1 = 5$$

Answer: 5

Check: $10 - 2 \times 3 + 1 = 10 - 6 + 1 = 5$ ✓

2. Now try one with the steps

Work out $2 + 3 \times (4^2 - 6) \div 2$

Step 1 · Brackets — but first, indices inside the bracket: $4^2 = 16$

Step 2 · Multiplication and division left to right: 3×10 first

Step 3 · Then divide: $30 \div 2 = 15$

Step 4 · Addition

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. Calculate: $3 + 4 \times 5$ [1]

2. Work out: $24 - 8 \div 2$ [1]

3. Calculate: $(7 + 3)^2 - 6 \times 4$ [2]

4. Work out: $3^2 + 4^2$ [1]

5. Insert brackets to make this true: $5 + 3 \times 4 - 2 = 30$ [2]

6. Calculate: $4 + 6 \div 2 \times 3 - 1$ [2]

7. Calculate: $18 - 3 \times 4$ [1]

8. Calculate: $(18 - 3) \times 4$ [1]

9. Calculate: $40 \div (2 + 6)$ [1]

10. Calculate: 2×5^2 [1]

11. Calculate: $36 \div 4 \times 3$ [1]

12. Calculate: $(12 + 8) \div (7 - 3)$ [1]

13. Calculate: $(2 \times 5)^2$ [1]

14. Calculate: $7 + 3 \times (10 - 4)^2 \div 9$ [2]

15. Calculate: $(15 - 3^2) \times 2 + 8 \div 4$ [2]

16. Insert one pair of brackets to make this true: $2 + 6 \times 5 - 1 = 26$ [2]

17. Calculate: $-3^2 + 4 \times (-2)$ [2]

4. Before you hand it in

$3 + 4 \times 5 = 35$ (adding first because it's written first)

Multiplication and division ALWAYS happen before addition and subtraction, regardless of position. Underline $\times$ and $\div$ operations and do them first.

$8 \div 2 \times 4 = 1$ (doing $2 \times 4 = 8$ first then $8 \div 8 = 1$)

$\times$ and $\div$ have equal priority. When they appear together with no brackets, go LEFT TO RIGHT: $8 \div 2 = 4$, then $4 \times 4 = 16$.

$5 + 3 \times 0 = 0$ (adding $5 + 3 = 8$ first, then $\times 0$)

Multiplication first: $3 \times 0 = 0$, then $5 + 0 = 5$. Be especially careful with $\times 0$ — the whole term goes to zero.

$(3 + 4)^2 = 3^2 + 4^2 = 25$ (distributing the power incorrectly)

$(3 + 4)^2$ means the WHOLE bracket is squared: $7^2 = 49$. Only after evaluating the bracket can you apply the index.