

Negative Numbers

KS3 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Calculate $-7 + 3$

Step 1 · Start at -7 on the number line

Position: -7

Step 2 · Add 3 means move 3 steps right

$-7 \rightarrow -6 \rightarrow -5 \rightarrow -4$

Step 3 · Land on the answer

-4

Answer: $-7 + 3 = -4$

Check: -4 is 3 more than -7 ✓

2. Now try one with the steps

Calculate -5×-3

Step 1 · Identify the signs

Step 2 · Apply the sign rule

Step 3 · Multiply the values

Answer:

3. Practice

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

1. Calculate: $-5 + 8$ [1]

2. Calculate: $3 - 7$ [1]

3. Calculate: $-4 - 5$ [1]

4. Calculate: -3×4 [1]

5. Calculate: -6×-2 and explain the sign rule used. [2]

6. Order these from smallest to largest: $-8, 3, -2, 0, -5$ [2]

7. Calculate: $-12 + 5$ [1]

8. Calculate: $6 - (-4)$ [1]

9. Calculate: $-9 - (-3)$ [1]

10. Calculate: $-36 \div 9$ [1]

11. Calculate: $-48 \div -6$ [1]

12. In Aberdeen the temperature is -3°C at 6am. By midday it has risen by 11 degrees. What is the midday temperature? [2]

13. A freezer is at -18°C and a fridge is at 4°C . How many degrees warmer is the fridge? [2]

14. Calculate: $(-2)^3$ [2]

15. Calculate: $-3 \times 4 - (-5) \times 2$

[2]

16. Calculate: $(-5)^2 - 3 \times (-4)$

[3]

4. Before you hand it in

Saying -8 is bigger than -3 because '8 is bigger than 3'

On a number line, -8 is further left than -3 , so -8 is SMALLER. The larger the magnitude of a negative number, the smaller its value. $-3 > -8$.

Writing $4 - (-6) = -2$

Subtracting a negative number is the same: $4 - (-6) = 4 + 6 = 10$. Two minus signs together become a plus.

Writing $(-3)^2 = -9$

$(-3)^2 = (-3) \times (-3) = 9$. Negative $\times$ negative is positive. Note that -3^2 (no brackets) means $-(3^2) = -9$, which is different.