Your notes

GCSE Maths: revision notes

Negative numbers

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Ordering negative numbers

- On a **number line**, numbers get smaller as you go left. –8 is less than –3.
- The further a **negative number** is from zero, the smaller it is.

Adding and subtracting

- Adding a **negative number** is the same as subtracting: 5 + (–3) = 5 – 3 = 2.
- Subtracting a **negative number** is the same as adding: 5 – (–3) = 5 + 3 = 8.
- Use a **number line** for problems like –4 – 6: start at –4 and move 6 left to –10.

Multiplying and dividing

- If the **signs** are the same, the answer is positive: –6 × –4 = 24.
- If the **signs** are different, the answer is negative: –20 ÷ 5 = –4.
- With several numbers, count the negative **signs**: an even number of them gives a positive answer.

Powers of negative numbers

- $(-3)^2 = -3 \times -3 = 9$, but -3^2 means $-(3^2) = -9$, because the power comes before the minus **sign**.
- $(-2)^3 = -8$: an odd power of a **negative number** is negative.

Temperatures

- The **difference** between 4 °C and –9 °C is 4 – (–9) = 13 degrees.
- A rise of 8 degrees from –5 °C gives 3 °C.

Key terms

Negative number	A number less than zero.
Integer	A whole number, which can be positive, negative or zero.
Number line	A line with numbers placed at equal intervals, used to compare and calculate.
Difference	The result of subtracting one number from another.
Sign	Whether a number is positive (+) or negative (–).

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What is –3 + 5?
2. What is –4 – 6?
3. What is 5 – (–3)?
4. What is –6 × –4?
5. What is –20 ÷ 5?
6. Which number is the smallest?
7. The temperature is –5 °C and rises by 8 degrees. What is the new temperature?
8. What is the difference between 4 °C and –9 °C?

Answers

1. 2
2. –10
3. 8
4. 24
5. –4
6. –7
7. 3 °C
8. 13 degrees

What to do next

Practise 12 questions on this topic

Try 6 exam questions, with mark schemes

Read the lesson, one step at a time

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