

Playing with Numbers

Chapter 5: Playing with Numbers · Topic 1

Key Concept

Divisibility rules help us quickly check if a number is divisible by another, like a number being divisible by 3 if the sum of its digits is divisible by 3.

Numbers can be represented generally using letters, like a two-digit number being $10a+b$, where a and b represent digits.

This generalisation helps us understand and prove number patterns and tricks, like why reversing digits and subtracting gives a multiple of 9.

Exploring these numerical relationships builds deeper mathematical reasoning and prepares us for more advanced algebra.

Quick Revision Notes

- Divisibility rules quickly check number divisibility.
- Divisible by 3 if digit sum is divisible by 3.
- Numbers can be generalised using letters.
- A two-digit number is $10a+b$.
- This helps prove number patterns.
- Reversing and subtracting gives a multiple of 9.
- This builds mathematical reasoning.
- It prepares for advanced algebra.

Practice Questions

- 1 Check if 246 is divisible by 3.
- 2 Represent a 3-digit number generally using letters.
- 3 Verify the reverse-and-subtract trick with a 2-digit number.
- 4 Discuss why divisibility rules work.
- 5 Research another divisibility rule, like for 9.
- 6 Create your own number pattern and explain it.