

Understanding Arithmetic Expressions

Chapter 2: Arithmetic Expressions · Topic 1

Key Concept

Understanding how to correctly read and interpret an expression before calculating is essential, since misreading the order of operations can lead to entirely wrong answers — for example, ' $3 + 4 \times 2$ ' is different from ' $(3+4) \times 2$ ', even though they look similar, because the placement of brackets changes which operation happens first. Arithmetic expressions form the foundation for algebra, where numbers are eventually replaced with variables representing unknown quantities.

Quick Revision Notes

- An arithmetic expression combines numbers using $+$, $-$, $\times$, $\div$ operations.
- Brackets indicate which operations should be performed first.
- ' $3+4\times 2$ ' differs from ' $(3+4)\times 2$ ' due to bracket placement changing the order of operations.
- Arithmetic expressions are the foundation for algebraic expressions using variables.

Practice Questions

- 1 Evaluate: $10 - 2 \times 3 + 4$.
- 2 Evaluate: $(10-2) \times (3+4)$.
- 3 Explain why ' $3+4\times 2$ ' and ' $(3+4)\times 2$ ' give different results.