

Division of Integers

Chapter 10: Operations with Integers · Topic 2

Key Concept

For example, $(-12) \div (-3) = 4$ (same sign, so positive), while $12 \div (-3) = -4$ (different signs, so negative). Since division and multiplication are inverse operations, checking a division answer by multiplying the quotient back by the divisor (and confirming it gives the original dividend) is a useful way to verify integer division calculations are correct, especially when dealing with negative numbers where sign errors are common.

Quick Revision Notes

- Same sign $\div$ same sign = positive quotient (e.g., $(-12) \div (-3) = 4$).
- Different signs $\div$ different signs = negative quotient (e.g., $12 \div (-3) = -4$).
- Division sign rules mirror multiplication sign rules, since they are inverse operations.
- Checking division by multiplying the quotient back by the divisor helps verify the answer.

Practice Questions

- 1 Divide: $(-20) \div (-4)$.
- 2 Divide: $18 \div (-6)$.
- 3 Verify your answer to $(-20) \div (-4)$ by multiplying the quotient back by the divisor.