

Multiplication of Integers

Chapter 10: Operations with Integers · Topic 1

Key Concept

For example, $(-3) \times (-4) = 12$ (same sign, so positive), while $(-3) \times 4 = -12$ (different signs, so negative). This rule can be understood intuitively: multiplying a negative number represents 'reversing direction' on a number line, so multiplying by two negatives reverses direction twice, ending up positive again — similar to how two 'no's can sometimes mean 'yes' in double-negative sentences.

Quick Revision Notes

- Same sign $\times$ same sign = positive result (e.g., $(-3) \times (-4) = 12$).
- Different signs $\times$ different signs = negative result (e.g., $(-3) \times 4 = -12$).
- Multiplying by a negative can be thought of as 'reversing direction' on a number line.
- Two reversals (multiplying by two negatives) return to the original positive direction.

Practice Questions

- 1 Multiply: $(-4) \times 6$.
- 2 Multiply: $(-7) \times (-3)$.
- 3 Explain, using the number line idea of 'reversing direction,' why two negatives multiplied give a positive.