

Numbers round and word scramble for IB Maths: answers

IB Math Revision · IB Maths SL and HL (AA and AI) · Teacher answers and notes

No GDC: that's the point.

Teacher notes

- How to play: put a round on the board, give 30 seconds, then ask for the closest result and the working. Exactly on target scores 10, within 5 scores 7, within 10 scores 5. Use the 'Play more rounds' generator on this page for as many new rounds as you like; every target it makes can be reached.
- Word scramble: one person reads the nine letters aloud, everyone writes the maths word. Ask for a one-line definition as a tie-break.

Starter

1. **300**
 - $75 \times 4 = 300$
2. **63**
 - $100 - 37 = 63$
3. **200**
 - $8 \times 25 = 200$
4. **50**
 - $450 \div 9 = 50$

Task A: Numbers rounds

- a. **$8 \times (75 - 6 - 3 - 2) = 512$**
 - $75 - 6 - 3 - 2 = 64$
 - $8 \times 64 = 512$
- b. **$(50 + 25 - 7) \times (4 + 1) - 9 = 331$**
 - $50 + 25 - 7 = 68$ and $4 + 1 = 5$
 - $68 \times 5 = 340$, and $340 - 9 = 331$
- c. **$(75 + 5 + 6) \times 10 + 3 - 2 = 861$**
 - $75 + 5 + 6 = 86$
 - $86 \times 10 = 860$, and $860 + 3 - 2 = 861$
- d. **$(25 + 8 + 1) \times (4 + 3) + 9 = 247$**
 - $34 \times 7 = 238$
 - $238 + 9 = 247$

Task B: Word scramble

- a. **LOGARITHM**
 - Logarithm: the power a base is raised to, to give a number.
- b. **EXPONENTS**
 - Exponents: powers, like the 3 in 2^3 .

c. **SEQUENCES**

- Sequences: ordered lists of numbers that follow a rule.

d. **QUADRATIC**

- Quadratic: with a squared term, like $x^2 + 3x$.

Task C: Small numbers, many targets

a. **$1 + 2 + 3 + 4 = 10$**

- Add them all.

b. **$1 \times 2 \times 3 \times 4 = 24$**

- Multiply them all.

c. **$(4 + 1) \times (3 + 2) = 25$**

- $5 \times 5 = 25$

Extension

1. **29 cannot be made; the largest is 36**

- Every number from 1 to 28 can be made, for example $26 = (4 \times 3 + 1) \times 2$, $27 = (4 \times 2 + 1) \times 3$ and $28 = (3 \times 2 + 1) \times 4$.
- The largest: $(1 + 2) \times 3 \times 4 = 36$. Checking every way to combine the four numbers shows 29 is impossible.

Every question is original and every answer was recomputed by computer before publishing.