GRADE 7 MATHEMATICS

Algebra — Revision Booklet

Name: Date:

INQUIRY

Use this booklet to revise all key ideas, formulas, and methods. Work through the examples, then practise.

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

Term	Definition
Expand	a(b + c) = ab + ac. Multiply everything inside by term outside.
Factorise	ab + ac = a(b + c). Take out highest common factor.
Equation	Has = sign. Solve by doing same to both sides.
Inequality	Uses <, >, <=, >=. Solve like equation but flip sign if dividing by negative.
nth term	T = dn + c. d = common difference, c = adjustment.
y = mx + c	m = gradient (steepness), c = y-intercept (where line crosses y-axis).
Parallel lines	Same gradient, different intercepts. Never cross.

Topic 1: Expanding & Factorising

1. Expand and simplify: 5(a + 3) - 2(a - 4) [2 marks]

Show your working:

2. Factorise fully: 14xy - 21x [2 marks]

Show your working:

Topic 2: Multi-Step Equations

3. Solve: 4(y - 2) = 3(y + 5) [3 marks]

Show your working:

4. Solve: 7x + 1 = 4x + 22 [2 marks]

Show your working:

Topic 3: Inequalities

5. Solve and represent on a number line: 3x - 1 > 11 [2 marks]

Show your working:

6. You have 80 euro. Kebabs cost 4.50 euro each. Write and solve an inequality for maximum kebabs. [2 marks]

Show your working:

Topic 4: Sequences

7. Find nth term for: 7, 11, 15, 19, ... Then find which term = 99. [3 marks]

Topic 5: Linear Graphs

8. For y = -3x + 12: (a) State m and c. (b) Find y when x = 4. (c) Find x when y = 0. (d) Is this line going up or down? [4 marks]