Homework Exercise: Number Operations Mastery

Name: _____ **Date:** _____ **Class:** _____

Lesson Topic: Addition, Subtraction, Multiplication, Division

Website: `https://oatutors.co.uk/`

Instructions

Complete all sections. Show your working clearly. Use the mental strategies learned in class where appropriate. Check your answers using inverse operations.

1 Section A: Mental Arithmetic (20 Questions)

Calculate these in your head using the strategies we learned. Write only the answer.

1. $47 + 38 =$ _____
2. $56 + 29 =$ _____
3. $73 + 48 =$ _____
4. $84 + 67 =$ _____
5. $92 + 39 =$ _____
6. $124 - 67 =$ _____
7. $158 - 89 =$ _____
8. $207 - 98 =$ _____
9. $163 - 76 =$ _____
10. $251 - 87 =$ _____
11. $8 \times 37 =$ _____
12. $9 \times 24 =$ _____
13. $6 \times 45 =$ _____
14. $7 \times 38 =$ _____
15. $144 \div 12 =$ _____
16. $156 \div 13 =$ _____
17. $168 \div 14 =$ _____
18. $195 \div 15 =$ _____
19. $25 \times 8 =$ _____
20. $36 \times 5 =$ _____

2 Section B: Written Methods (5 Questions)

Use column addition, grid method for multiplication, or long division. Show all working.

Question 1: Column Addition

Calculate: $2{,}847 + 1{,}395 + 726 = ?$

Question 2: Column Subtraction

Calculate: $5{,}234 - 1{,}678 = ?$

Question 3: Grid Method Multiplication

Calculate: $47 \times 38 = ?$

Question 4: Long Multiplication

Calculate: $346 \times 27 = ?$

Question 5: Long Division

Calculate: $1{,}248 \div 24 = ?$

3 Section C: Word Problems (3 Questions)

Read carefully, identify the operation needed, solve step by step.

Question 1

A school orders 24 boxes of pencils. Each box contains 36 pencils. How many pencils are there altogether? If the school has 847 students, how many pencils are left over after giving one to each student?

Question 2

Sarah has £4.50. She buys 3 items costing £1.25 each. How much change does she receive? If she then buys another item costing £0.85, how much money does she have left?

Question 3

A factory produces 1,440 widgets per day. How many widgets are produced in a week (7 days)? If each widget weighs 250g, what is the total weight of widgets produced in one day? Give your answer in kilograms.

4 Section D: Challenge Questions (4 Questions)

These are 11+ level questions. Think carefully and show all working.

Question 1

What is the missing number? $347 + \_\_\_\_\_ = 1000$

Question 2

Find two numbers that multiply to give 144 and add to give 24.

Question 3

Calculate: $7,245 \div 15 = \_\_\_\_\_$ remainder $\_\_\_\_\_$

Question 4

A number when doubled and then increased by 7 gives 39. What is the number?

5 Extension Activity: Factor Investigation

Find all the factor pairs of 72. A factor pair consists of two numbers that multiply to give 72.

Example: $1 \times 72 = 72$, so (1, 72) is a factor pair.

List all factor pairs:

1. (1, 72)

2. (_____, _____)

3. (_____, _____)

4. (_____, _____)

5. (_____, _____)

6. (_____, _____)

Self-Assessment

Section	Confident	Need Practice	Need Help
Mental Arithmetic	☐	☐	☐
Written Methods	☐	☐	☐
Word Problems	☐	☐	☐
Challenge Questions	☐	☐	☐

Parent/Guardian Signature: _____ **Date:** _____

Teacher Use Only

Section A	___/20	Comments:
Section B	___/5	
Section C	___/3	
Section D	___/4	
Extension	___/6	
Total	___/38	