

GRADE 5 MATHEMATICS

Maths Games & Puzzles

Complete Printable Worksheet Pack

1. Number Puzzles & Logic

2. Sudoku

3. Magic Squares & Number Grids

4. Maths Riddles & Code Breakers

5. Strategy & Target Number Games

6. Mixed Puzzle Challenge

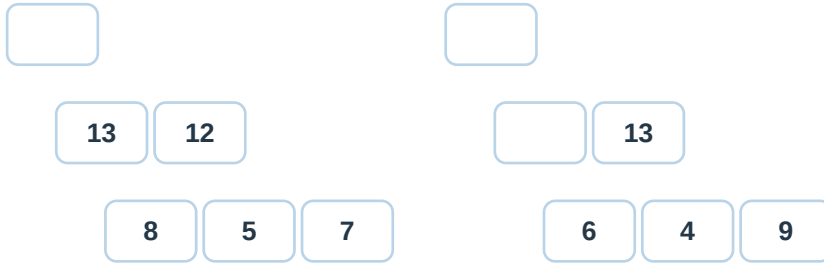
Separate answer-key pages • A4 print-ready

Worksheet 1: Number Puzzles & Logic

Think carefully, look for patterns, and explain your reasoning.

A. Number Pyramids

1. Complete each number pyramid. Each number above two neighbouring numbers is their sum.



2. Fill the missing numbers: 3, 7, 11, __, __, 23, __. Then write the rule.
- _____
- _____
3. A two-digit number is greater than 40, less than 60, even, and has digits that add to 10. What is the number?
- _____
4. Use the digits 2, 4, 6 and 8 exactly once to make the greatest possible 4-digit number that is divisible by 4.
- _____

B. Make the Target

5. Use 3, 4, 6 and 8 exactly once, with +, −, × or ÷, to make 24.
- _____
- _____
6. Give one number that is a multiple of 6, between 40 and 70, and whose digits have a difference of 3.
- _____
7. A secret number is multiplied by 4 and then 7 is added. The result is 55. Find the secret number.
- _____
8. Challenge: I am thinking of a number. Half of me is 18 more than 7. What number am I?
- _____

Answer Key 1: Number Puzzles & Logic

Solutions

1. Left pyramid: 13, 12 and 25. Right pyramid: 10, 13 and 23.
2. 15, 19, 27. Rule: add 4 each time.
3. 46.
4. 8642.
5. $(8 - 6) \times 3 \times 4 = 24$.
6. 63 or 69. Both are multiples of 6 and their digits differ by 3.
7. 12, because $12 \times 4 + 7 = 55$.
8. 50, because $50 \div 2 = 25$ and $25 - 7 = 18$.

Worksheet 2: Sudoku

Complete each 4×4 Sudoku. Every row, column and 2×2 box must contain 1–4 exactly once.

A. Sudoku 1

1			4
	4	1	
2			3
	3	4	

B. Sudoku 2

	2		4
3			1
2		4	
	4	2	

C. Sudoku 3

4		2	
	3		1
2		4	
	1		3

Answer Key 2: Sudoku

Sudoku 1 — completed grid

1	2	3	4
3	4	1	2
2	1	4	3
4	3	2	1

Sudoku 2 — completed grid

1	2	3	4
3	4	2	1
2	1	4	3
4	3	1	2

Sudoku 3 — completed grid

4	3	2	1
2	1	4	3
3	4	1	2
1	2	3	4

Worksheet 3: Magic Squares & Number Grids

Use number relationships to complete the grids.

A. 3×3 Magic Square

1. Complete the classic 3×3 magic square using the numbers 1–9 exactly once. Each row, column and diagonal must total 15.

8		6
	5	
4		2

B. Another Magic Square

2. Complete this 3×3 square. Use the numbers 2–10 exactly once. Each row, column and diagonal must total 18.

9		7
	6	
5		3

C. Number Grid Challenge

3. Fill the blanks. Each row follows its own multiplication pattern.

4	8	12	
7	14		28
9		27	36

4. State the rule for each row.

Answer Key 3: Magic Squares & Number Grids

A. Magic Square 1

8	1	6
3	5	7
4	9	2

B. Magic Square 2

9	2	7
4	6	8
5	10	3

C. Number Grid

4	8	12	16
7	14	21	28
9	18	27	36

4. Row 1: $\times 2$, then $+4$ repeatedly (equivalently multiples of 4). Row 2: $\times 2$, then $+7$ repeatedly. Row 3: $+9$ repeatedly (multiples of 9).

Worksheet 4: Maths Riddles & Code Breakers

Solve the clue, then use the code to reveal the hidden message.

A. Maths Riddles

1. I am a number between 20 and 50. I am divisible by 5 and by 3. What am I?

2. I have two digits. My tens digit is 3 more than my ones digit. My digits add to 9. What am I?

3. I am a square number between 30 and 70. What am I?

4. My quarter is 12. What number am I?

B. Code Breaker

5. Use A=1, B=2, C=3, ... Z=26. Decode: 13 – 1 – 20 – 8.

6. Encode MATH using A=1, B=2, ... Z=26.

7. A secret code changes a number by doubling it and then subtracting 3. The coded result is 17. What was the original number?

C. Challenge

8. Using A=1 to Z=26, find a word whose letters total 40. Give one possible word and show your calculation.

Answer Key 4: Maths Riddles & Code Breakers

Solutions

1. 30.
2. 63.
3. 49.
4. 48.
5. MATH.
6. $M = 13, A = 1, T = 20, H = 8 \rightarrow 13-1-20-8$.
7. 10, because $10 \times 2 - 3 = 17$.
8. One valid example is $BLUE = 2 + 12 + 21 + 5 = 40$. Other correctly verified words are acceptable.

Worksheet 5: Strategy & Target Number Games

These puzzles reward flexible thinking. Check every proposed solution.

A. Target Numbers

1. Make 50 using two or three numbers chosen from 2, 5, 10 and 25. Use each chosen number once.

2. Make 100 using exactly four numbers: 1, 2, 5 and 10. Use each once and any of the four basic operations.

B. Balance the Equation

3. Fill the blank: $48 + 36 = 50 + \underline{\quad}$.

4. Fill the blank: $7 \times \underline{\quad} = 84 \div 2$.

5. Insert brackets to make the statement true: $6 + 4 \times 3 = 30$.

C. Logic Challenge

6. Three friends choose different numbers from 12, 18 and 24. Ana's number is not 12. Ben's number is greater than Ana's. Cara has 12. Which number does each friend choose?

7. A game gives 3 points for a win and 1 point for a draw. A player has 17 points after 7 games. Give one possible combination of wins, draws and losses.

8. Find two different whole numbers that multiply to 72 and have a difference of 1.

Answer Key 5: Strategy & Target Number Games

Solutions

1. $10 \times 5 = 50$. This uses two of the available numbers, which is allowed by the wording.
2. $10 \times 5 \times 2 \times 1 = 100$.
3. 34.
4. 6.
5. $(6 + 4) \times 3 = 30$.
6. Cara = 12, Ana = 18, Ben = 24.
7. One solution: 5 wins, 2 draws and 0 losses $\rightarrow 15 + 2 = 17$ points.
8. 8 and 9, because $8 \times 9 = 72$ and $9 - 8 = 1$.

Worksheet 6: Mixed Puzzle Challenge

Final challenge: combine patterns, logic, arithmetic and careful checking.

A. Mixed Puzzles

1.
Complete: 2, 6, 12, 20, 30, __, __. What is the pattern?

2.
Find the missing number: $4 \times __ + 7 = 39$.

3.
A number is divisible by 2 and 5 and is between 100 and 130. Its digits add to 4. What is the number?

4.
Use the digits 1, 3, 5 and 7 exactly once to make the smallest 4-digit number divisible by 5.

5.
Find the missing value: $\frac{3}{4} = __ / 20$.

B. Mini Logic Grid

6.
Four students scored 12, 15, 18 and 21 points. Asha scored more than Ben. Cara scored 18. Dev scored less than Ben. Ben did not score 12. Match each student to a score.

Student	Score
Asha	_____
Ben	_____
Cara	_____
Dev	_____

C. Final Brain Teaser

7.
I am thinking of a two-digit number. If you reverse my digits, the new number is 27 greater than the original. My digits add to 11. What number am I?

Answer Key 6: Mixed Puzzle Challenge

Solutions

1. 42, 56. The differences are +4, +6, +8, +10, +12, +14.
2. 8.
3. 130 (divisible by 2 and 5, lies between 100 and 130 inclusive, and $1+3+0=4$).
4. 1375.
5. 15/20.
6. Cara = 18, Ben = 15, Asha = 21, Dev = 12.
7. 47, because reversing gives 74; $74 - 47 = 27$ and $4 + 7 = 11$.