

Mangahigh Mastery Series

Mental Maths

Student's pack



MANGAHIGH

westermann

Worksheets

Topic	Description	Worksheets	Page	Completed?
Mental addition and subtraction of numbers less than 100	Practise adding and subtracting numbers less than 100, in your head.	1a Starter	4	
		1b Consolidation	6	
Mental addition and subtraction in multiples of 10, 100 and 1 000	Practise adding and subtracting with 10s, 100s and 1 000s.	2a Starter	7	
		2b Consolidation	9	
Mental multiplication and division: times tables	Practise mental multiplication and division using your knowledge of times tables. Also link multiplication and division.	3a Starter	10	
		3b Consolidation	12	
Order of operations	Practise using the order of operations in two-step and three-step calculations. Use the acronym BIDMAS to help you decide what order to do a calculation in.	4a Starter	13	
		4b Consolidation	15	
Rounding whole numbers and decimals	Practise rounding whole numbers to the nearest 10, 100 and 1 000 and decimals to the nearest unit, tenth, hundredth and thousandth.	5a Starter	16	
		5b Consolidation	18	
Estimating	Practise rounding to estimate and estimating addition, subtraction, multiplication and division calculations.	6a Starter	19	
		6b Consolidation	21	
Convert between fractions, decimals and percentages	Practise converting between fractions, decimals and percentages.	7a Starter	22	
		7b Consolidation	24	
Order fractions and decimals	Practise ordering and comparing fractions and decimals.	8a Starter	25	
		8b Consolidation	27	

1a STARTER



Mental addition and subtraction of numbers less than 100

Name: _____

In this worksheet you will practise adding and subtracting numbers less than 100, in your head.

Single-digit addition and subtraction by visualising a number line

To add you move to the right on the number line, and to subtract you move to the left.

Use the number line to answer the following questions.



ANSWERS

1. $7 + 4$
2. $12 - 3$
3. $6 + 9$
4. $16 - 7$

Add and subtract 10

To add 10 you increase the digit in the tens column by 1 and to subtract 10 you decrease the digit in the tens column by 1.

Circle the correct answers.

ANSWERS

5. $45 + 10$
6. $72 - 10$
7. $12 + 10$
8. $98 - 10$

46	54	55	56
61	62	70	71
13	20	22	32
78	88	108	90

1a STARTER (continued)

Add and subtract single-digit values close to 10

To add 9 to a number, first add 10 and then subtract 1.

To subtract 9 from a number, first subtract 10 and then add 1.

Are the following calculations correct?

9. $39 + 9 = 48$

10. $28 - 9 = 17$

11. $76 + 9 = 75$

12. $54 - 9 = 45$

ANSWERS

Yes ☐ No ☐

Yes ☐ No ☐

Yes ☐ No ☐

Yes ☐ No ☐

Double digit addition and subtraction

In the following questions, add or subtract the tens and ones columns separately.

What is the missing digit?

13. $42 + 27 = \blacksquare 9$

14. $72 - 21 = 5 \blacksquare$

15. $19 + 56 = \blacksquare 5$

16. $86 - 32 = 5 \blacksquare$

ANSWERS

6	7	8	9
0	1	2	3
4	5	6	7
1	2	3	4



Now go online to www.mangahigh.com to play these activities and practise what you have learnt.

- Estimate with addition – Ice Ice Maybe (game)
- Estimate with subtraction – Ice Ice Maybe (game)

Try to answer three Hard questions in a row to earn a Bronze medal!

Remember to try each activity at least three times.

What is your highest score?



Gold



Silver



Bronze

1b CONSOLIDATION



Mental addition and subtraction of numbers less than 100

Name: _____

Use the number line to answer the following questions.



ANSWERS

1. $8 + 7$

2. $16 - 9$

Circle the correct answer.

3. $17 + 10$

4. $56 - 10$

ANSWERS

37 18 27 24

43 66 56 46

Are the following calculations correct?

5. $53 + 8 = 71$

6. $75 - 8 = 67$

ANSWERS

Yes ☐ No ☐

Yes ☐ No ☐

What is the missing digit?

7. $18 + 35 = 5 \blacksquare$

8. $84 - 36 = \blacksquare 8$

ANSWERS

3 4 5 6

5 6 3 4

Circle the correct answer.

9. $35 + 27$

10. $17 + 58$

ANSWERS

52 62 64 72

63 65 75 85

2a STARTER



Mental addition and subtraction in multiples of 10, 100 and 1 000

Name: _____

In this worksheet you will practise adding and subtracting with 10s, 100s and 1 000s.

Add or subtract 10, 100 or 1 000 to a number

When adding 10, 100 or 1 000, increase the digit in the tens, hundreds or thousands column by 1.

When subtracting 10, 100 or 1 000, decrease the digit in the tens, hundreds or thousands column by 1.

Circle the correct answers.

ANSWERS

1.	$73 + 10$	74	82	83	84
2.	$720 - 100$	610	620	700	710
3.	$2\,814 + 1\,000$	2\,815	2\,824	2\,914	3\,814
4.	$9\,432 - 1\,000$	9\,332	8\,329	9\,422	8\,432
5.	$10\,100 - 10$	10\,110	10\,900	10\,090	11\,000

Add or subtract multiples of 10

When adding multiples of 10, increase the digit in the tens column by that multiple.

When subtracting multiples of 10, decrease the digit in the tens column by that multiple.

Are the following calculations correct?

ANSWERS

6.	$49 + 20 = 69$	Yes <input type="checkbox"/>	No <input type="checkbox"/>
7.	$38 + 60 = 88$	Yes <input type="checkbox"/>	No <input type="checkbox"/>
8.	$52 - 30 = 82$	Yes <input type="checkbox"/>	No <input type="checkbox"/>
9.	$29 + 50 = 79$	Yes <input type="checkbox"/>	No <input type="checkbox"/>
10.	$92 - 40 = 62$	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Add or subtract multiples of 100

When adding multiples of 100, increase the digit in the hundreds column by that multiple.

When subtracting multiples of 100, decrease the digit in the hundreds column by that multiple.

What is the missing number in the equation?

11. $435 + \blacksquare = 735$

12. $139 + \blacksquare = 839$

13. $847 - \blacksquare = 24$

14. $623 - \blacksquare = 123$

15. $35 + \blacksquare = 835$

ANSWERS

200	300	400	500
700	600	500	400
400	500	600	700
500	400	300	600
200	400	600	800

Add and subtract multiples of 1 000

When adding multiples of 1 000, increase the digit in the thousands column by that multiple.

When subtracting multiples of 1 000, decrease the digit in the thousands column by that multiple.

Circle the correct answers.

16. $4\,135 + 3\,000$

17. $1\,839 + 7\,000$

18. $8\,247 - 6\,000$

19. $6\,946 - 5\,000$

20. $2\,220 + 8\,000$

ANSWERS

1 247	2 447	2 247	8 427
8 839	7 839	9 839	2 539
4 435	7 135	8 135	9 135
1 946	5 946	6 846	6 996
1 220	2 228	10 220	2 020



Now go online to www.mangahigh.com to play this activity and practise what you have learnt.

- Round and estimate: addition and subtraction (quiz)

Try to answer three Hard questions in a row to earn a Bronze medal!

Remember to try each activity at least three times.

What is your highest score?

2b CONSOLIDATION



Mental addition and subtraction in multiples of 10, 100 and 1 000

Name: _____

Circle the correct answers.

1. $98 - 10$
2. $473 + 100$
3. $4\,286 - 1\,000$

ANSWERS

88	94	108	86
373	423	573	583
2 886	3 286	2 286	5 286

Are the following calculations correct?

4. $49 - 20 = 39$
5. $24 + 70 = 94$
6. $52 - 30 = 22$

ANSWERS

Yes <input type="checkbox"/>	No <input type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>
Yes <input type="checkbox"/>	No <input type="checkbox"/>

What is the missing number in the equation?

7. $295 + \blacksquare = 495$
8. $387 + \blacksquare = 887$
9. $901 - \blacksquare = 301$
10. $712 - \blacksquare = 212$

ANSWERS

200	300	400	500
700	600	500	400
400	500	600	700
200	300	400	500

Circle the correct answers.

11. $8\,935 - 3\,000$
12. $839 + 8\,000$
13. $3\,917 - 2\,000$
14. $23 + 6\,000$
15. $4\,001 - 1\,000$

ANSWERS

4 275	5 935	4 215	9 935
8 839	7 839	9 839	2 539
5 917	5 447	1 917	8 427
6 230	6 023	8 300	6 203
2 001	3 001	5 001	5 100