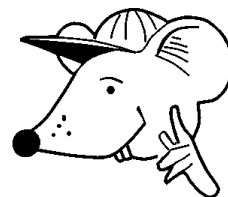


MATHEMATICS



N.S. Yr. 4 P.36

**Understanding subtraction and its relationship
to addition.**

Equipment

Paper, pencil, ruler

MathSphere

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Concepts

Children should be able to read, write and understand the following words:

Take away, subtract, how many are left?, how much less?, difference between, how much more?, how many more to make?, decrease, inverse.... and the minus sign (–)

They should know that:

Subtraction is the same as taking away, finding the difference between and complementary addition.

Subtraction is non-commutative.

When a larger number is subtracted from a smaller number, the answer is negative.

Subtracting a number from another makes it smaller.

Subtracting zero makes no difference to a number.

Subtraction is the inverse of addition.

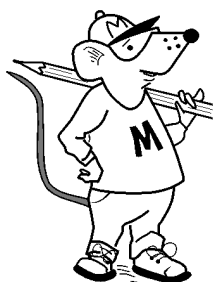
They should have good mental strategies for solving subtraction problems with simple numbers.

Can you say which of these are **true** and which are **false**?



1. $5 - 8 = 8 - 5$
2. $34 + 17 = 17 + 34$
3. $34 - 17 = 17 - 34$
4. 12 subtract 9 is the same as 9 subtract 12.
5. 36 add 56 is the same as 56 add 36.
6. 36 subtract 56 is the same as 56 subtract 36.
7. $56 - 0 = 56$
8. $17 - 0 = 17$
9. Thirty five subtract zero is thirty five.
10. Seventy two subtract nothing is twenty seven.
11. If you subtract zero from a number, the number does not change.
12. $54 - 23 + 23 = 54$
13. $56 + 0 - 12 = 56$
14. $0 + 0 - 0 + 0 = 4$

Can you say which of these are **true** and which are **false**?



1. $67 - 19 = 19 - 67$
2. $89 + 145 = 145 + 89$
3. $872 - 94 = 94 - 872$
4. 73 subtract 28 is the same as 28 subtract 73.
5. 739 add 629 is the same as 629 add 739.
6. 937 subtract 163 is the same as 163 subtract 937.
7. $94 - 0 = 94$
8. $74 - 0 = 74$
9. Sixty four subtract zero is sixty four.
10. Eighty nine subtract nothing is ninety eight.
11. If you add zero to a number, the number does not change.
12. $95 - 78 + 78 = 95$
13. $74 + 0 - 43 = 74$
14. $1 + 1 - 1 + 1 = 4$

Subtraction is the **inverse** (opposite) of addition and addition is the **inverse** of subtraction.

We can use this to **check our work**.

If we do the sum **56 - 32** and get **24**, we can check our answer by adding **24** and **32** to see if we get **56**.

Clever stuff!



Use this idea to calculate these sums and then **check your answers by adding**. The first one has been done for you.

1. $76 - 33$ Answer = 43. Check $33 + 43 = 76$ ✓

2. $450 - 51$

3. $28 - 13$

4. $100 - 65$

5. $1\,200 - 150$

6. $3\,450 - 451$

7. $90 - 32$

8. $65 - 45$

Calculate the answers to these sums and then **check your answers by adding**.
The first one has been done for you.

1. $90 - 27$ Answer = 63. Check $63 + 27 = 90$ ✓

2. $600 - 45$

3. $189 - 67$

4. $250 - 93$

5. $364 - 164$

6. $7\,890 - 4\,890$

7. $134 - 60$

8. $90 - 53$

9. $2\,000 - 450$

10. $382 - 283$

11. $670 - 255$

12. $2\,780 - 1\,779$

13. $699 - 510$

14. $838 - 80$

15. $35 - 17$

16. $276 - 166$

17. $937 - 287$

18. $288 - 65$

Checking your work is always very important. Many people have made dangerous mistakes because they did not check their work.

This is one way to check your subtraction sums are correct.



Here are some problems with words. They are not difficult, but you should work them out in your head as quickly as you can and be prepared to tell your teacher or parent how you did them.



For example: Subtract **28** from **65**.

I could **take away 20** first to get **45** and then take away **8** to get **37**.

I could subtract **30** and then add **2** back on.

I could subtract **28** from **68** and then subtract **3**.



1. What is **87** take away **9** ?
2. Subtract **7** from **45**.
3. Take **12** from **38**.
4. What is **53** less **17** ?
5. What is **234** subtract **135** ?
6. Subtract **89** from **96** .

You did so well on those, we thought you would like some more!



1. How many is **56** less **7** ?
2. What must Multy add to **67** to make **93** ?
3. How many more is **250** than **125** ?
4. What must Divvy add to **176** to make **200** ?
5. If I have **145** marbles and lose **28** of them, how many do I have now?
6. Decrease **86** by **14**.
7. I add a secret number to **67** and get **94**. What was the secret number?
8. Addy had **78** picture cards. He sold **39** of them. How many did he have left?
9. What must I take from **600** to leave **247** ?
10. What must I take from **1 000** to leave **350** ?
11. Find ten pairs of numbers that have a difference of **57**.
12. Find ten pairs of numbers that have a difference of **38**.

1. If you know that the difference between **57** and **93** is **36**,
can you immediately write down ten other pairs of numbers that have the same difference?
2. If you know that the difference between **1 483** and **1 629** is **146**,
can you immediately write down ten other pairs of numbers that have the same difference?

3. Calculate these answers as quickly as you can in your head.

a) $28 - 15 = \square$ b) $38 - \square = 9$ c) $\square - \text{hexagon} = 10$

d) $32 - 27 = \square$ e) $45 - \square = 7$ f) $\square - \text{hexagon} = 22$

g) $89 - 69 = \square$ h) $42 - \square = 8$ i) $\square - \text{hexagon} = 30$

4. Calculate these answers as quickly as you can.

a) $125 - 67 = \square$ b) $87 - \square = 28$ c) $\square - \text{hexagon} = 78$

d) $187 - 58 = \square$ e) $92 - \square = 36$ f) $\square - \text{hexagon} = 46$

g) $174 - 79 = \square$ h) $58 - \square = 19$ i) $\square - \text{hexagon} = 37$

5. Calculate these answers as quickly as you can using a pencil and paper.

a) $1\,327 - 753 = \square$ b) $1\,288 - \square = 745$ c) $\square - \text{hexagon} = 585$

d) $1\,639 - 835 = \square$ e) $1\,735 - \square = 676$ f) $\square - \text{hexagon} = 476$

g) $1\,294 - 733 = \square$ h) $1\,525 - \square = 956$ i) $\square - \text{hexagon} = 543$

1. If you know that the difference between **68** and **134** is **66**,
can you immediately write down ten other pairs of numbers that have the same difference?
2. If you know that the difference between **1 583** and **1 845** is **262**,
can you immediately write down ten other pairs of numbers that have the same difference?

3. Calculate these answers as quickly as you can in your head.

a) $45 - 23 = \square$ b) $95 - \square = 6$ c) $\square - \text{hexagon} = 12$

d) $67 - 45 = \square$ e) $27 - \square = 9$ f) $\square - \text{hexagon} = 34$

g) $75 - 37 = \square$ h) $65 - \square = 7$ i) $\square - \text{hexagon} = 42$

4. Calculate these answers as quickly as you can.

a) $423 - 33 = \square$ b) $78 - \square = 34$ c) $\square - \text{hexagon} = 53$

d) $164 - 78 = \square$ e) $85 - \square = 53$ f) $\square - \text{hexagon} = 63$

g) $419 - 77 = \square$ h) $94 - \square = 29$ i) $\square - \text{hexagon} = 16$

5. Calculate these answers as quickly as you can using a pencil and paper.

a) $1\,745 - 555 = \square$ b) $1\,433 - \square = 749$ c) $\square - \text{hexagon} = 374$

d) $1\,438 - 844 = \square$ e) $1\,354 - \square = 999$ f) $\square - \text{hexagon} = 376$

g) $1\,733 - 476 = \square$ h) $1\,527 - \square = 937$ i) $\square - \text{hexagon} = 643$

Answers**Page 3**

1. False 2. True 3. False 4. False 5. True 6. False 7. True
8. True 9. True 10. False 11. True 12. True 13. False 14. False

Page 4

1. False 2. True 3. False 4. False 5. True 6. False 7. True
8. True 9. True 10. False 11. True 12. True 13. False 14. False

Page 5

1. 76 2. 399 3. 15 4. 35 5. 1 050 6. 2 999
7. 58 8. 20

Page 6

1. 90 2. 555 3. 122 4. 157 5. 200 6. 3 000 7. 74
8. 37 9. 1 550 10. 99 11. 415 12. 1 001 13. 189 14. 758
15. 18 16. 110 17. 650 18. 223

Page 7

1. 78 2. 38 3. 26 4. 36 5. 99 6. 7

Page 8

1. 49 2. 26 3. 125 4. 24 5. 117 6. 72 7. 27
8. 39 9. 353 10. 650 11. and 12. Any ten pairs that have a difference of 57 and 38 respectively.

Answers**Page 9**

1./2. Any ten pairs that have a difference of 36/146. Encourage thinking in patterns.

Eg. add the same amount to each number. So $93 - 57 = 36$

Therefore $94 - 58 = 36$

$95 - 59 = 36$ etc.

Or:

$193 - 157 = 36$

$293 - 257 = 36$ etc

- 3.** a) 13 b) 29 c) any suitable pairs
d) 5 e) 38 f) any suitable pairs
g) 20 h) 34 i) any suitable pairs

- 4.** a) 58 b) 59 c) any suitable pairs
d) 129 e) 56 f) any suitable pairs
g) 95 h) 39 i) any suitable pairs

- 5.** a) 574 b) 543 c) any suitable pairs
d) 804 e) 1 059 f) any suitable pairs
g) 561 h) 569 i) any suitable pairs

Page 10

1./2. Any ten pairs that have a difference of 66/262. Again, encourage children to think in patterns.

Eg. add the same amount to each number. So $134 - 68 = 66$

Therefore $135 - 69 = 66$

$136 - 70 = 66$ etc.

Or:

$234 - 168 = 66$

$334 - 268 = 66$ etc

- 3.** a) 22 b) 89 c) any suitable pairs
d) 22 e) 18 f) any suitable pairs
g) 38 h) 58 i) any suitable pairs

- 4.** a) 390 b) 44 c) any suitable pairs
d) 86 e) 32 f) any suitable pairs
g) 342 h) 65 i) any suitable pairs

- 5.** a) 1 190 b) 684 c) any suitable pairs
d) 594 e) 355 f) any suitable pairs
g) 1 257 h) 590 i) any suitable pairs