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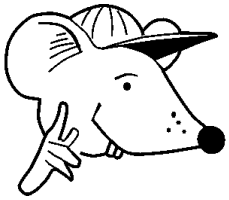
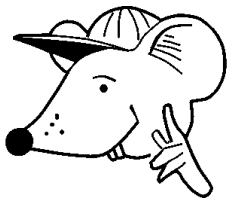


MATHEMATICS



N.S. Yr. 5 P.37

Understanding subtraction and its relationship to addition.

Equipment

Paper, pencil, ruler

MathSphere

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.

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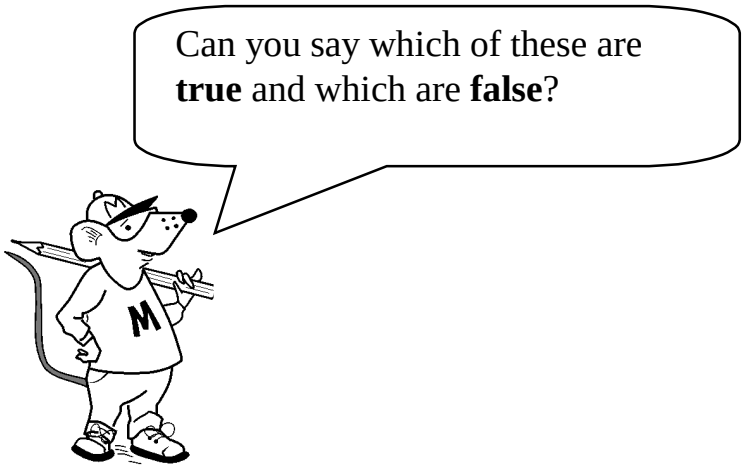

1. 148 – 73 = 73 – 148

2. 240 + 130 = 130 + 240

3. 78 – 36 = 36 – 78

4. 143 subtract 56 is the same as 56 subtract 143.

5. 27 add 39 is the same as 39 add 27.

6. 480 subtract 320 is the same as 320 subtract 480.

7. 150 – 390 gives a negative answer.

8. 678 – 937 gives a positive answer.

9. Two hundred and thirty subtract twenty six gives a negative answer.

10. 3.2 – 1.3 gives a positive answer.

11. If you subtract a positive number from a smaller number, the answer is always negative.

12. 24 – 11 + 11 = 24

13. 36 – 45 gives a positive answer.

14. 45 – 36 gives a positive answer.

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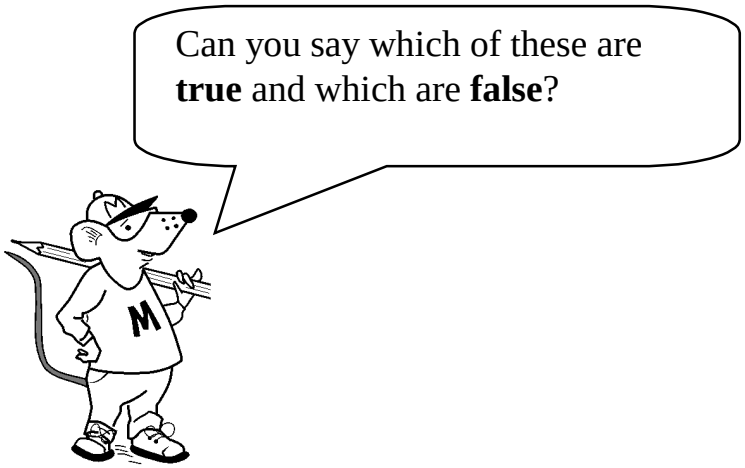

1. 100 – 39 = 39 – 100

2. 456 + 217 = 217 + 456

3. 385 – 213 = 213 – 385

4. 600 subtract 127 is the same as 127 subtract 600.

5. 237 add 153 is the same as 153 add 237.

6. 640 subtract 375 is the same as 375 subtract 640.

7. 285 – 153 gives a negative answer.

8. 830 – 350 gives a positive answer.

9. Two hundred and fifty subtract twenty six gives a positive answer.

10. 5.1 – 2.9 gives a positive answer.

11. If you subtract a positive number from a larger number, the answer is always negative.

12. 68 – 35 + 35 = 68

13. 6.9 – 5 gives a positive answer.

14. 3.5 – 6.1 gives a positive answer.

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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 **48 - 35** and get **13**, we can check our answer by adding **13** and **35** to see if we get **48**.

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. 63 – 17 Answer = 46 Check 17 + 46 = 63 √

2. 84 – 19

3. 27 – 18

4. 3.2 – 1.5

5. 120 – 56

6. 4.3 – 1.9

7. 375 – 288

8. 450 – 370

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

1. 2.8 – 1.5 Answer = 1.3 Check 1.5 + 1.3 = 2.8 √

2. 4.3 – 0.6

3. 3.9 – 1.3

4. 56 – 27

5. 49 – 32

6. 653 – 528

7. 1 060 – 947

8. 850 – 325

9. 200 – 156

10. 400 – 337

11. 1 000 – 285

12. 4.3 – 1.8

13. 4.8 – 2.9

14. 8.5 – 3.4

15. 851 – 276

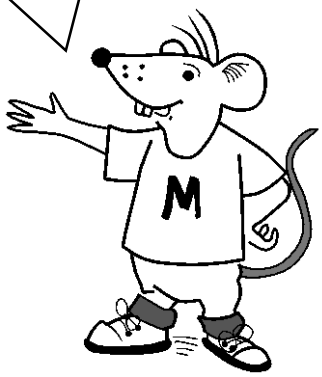
16. 490 – 251

17. 100 – 3.8

18. 25 – 4.2

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 **23** from **32**

I could **take away 20** first to get **12** and then take away **3** to get **9**.

I could subtract **30** and then add **7** back on.

I could subtract **23** from **33** and then subtract **1**.

1. What is **48** take away **25** ?

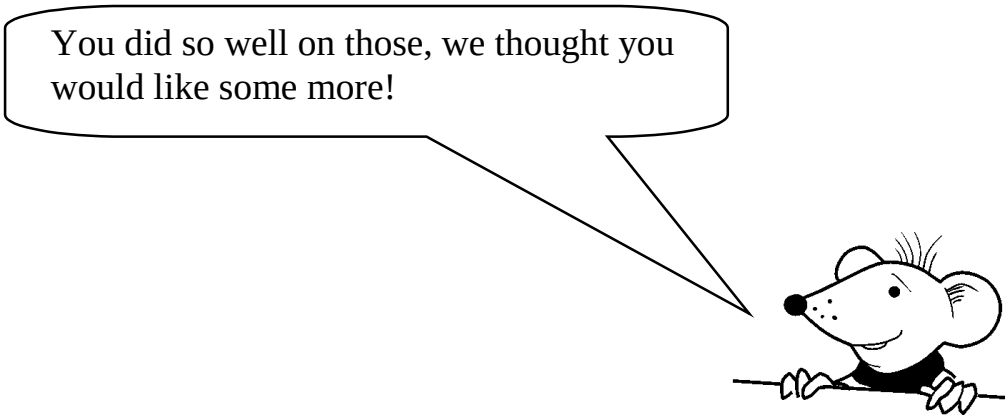
2. Subtract **39** from **56**.

3. Take **2.1** from **12**.

4. What is **48** less **17** ?

5. What is **3.5** subtract **1.7** ?

6. Subtract **4.5** from **8.1** .



1. How many is **250** less **82** ?

2. What must Divvy add to **285** to make **300** ?

3. How many more is **400** than **275** ?

4. What must Multy add to **185** to make **407** ?

5. If I have **96** football coupons and lose **28** of them, how many do I have now?

6. Decrease **270** by **39**.

7. I add a secret number to **56** and get **180**. What was the secret number?

8. Subby had **180** marbles. He sold **26** of them. How many did he have left?

9. What must I take from **450** to leave **120** ?

10. What must I take from **1 030** to leave **80** ?

11. Find ten pairs of numbers that have a difference of **64**.

12. Find ten pairs of numbers that have a difference of **48**.

1. If you know that the difference between **45** and **31** is **14**, can you immediately write down ten other pairs of numbers that have the same difference?

2. If you know that the difference between **105** and **127** is **22**, 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) 84 – 27 = ☐ **b) 195 – ☐ = 84** **c) ☐ – ⬡ = 24**

d) 39 – 17 = ☐ **e) 327 – ☐ = 117** **f) ☐ – ⬡ = 17**

g) 150 – 43 = ☐ **h) 89 – ☐ = 37** **i) ☐ – ⬡ = 102**

4. Calculate these answers by jotting down your calculations.

a) 57 – 29 = ☐ **b) 35 – ☐ = 18** **c) ☐ – ⬡ = 12**

d) 56 – 48 = ☐ **e) 92 – ☐ = 65** **f) ☐ – ⬡ = 18**

g) 79 – 35 = ☐ **h) 43 – ☐ = 17** **i) ☐ – ⬡ = 205**

5. Calculate these answers by laying out your sums in a formal way.

a) 39.32 – 15.41 = ☐ **b) 48.15 – ☐ = 14.15** **c) ☐ – ⬡ = 1.30**

d) 17.84 – 8.75 = ☐ **e) 23.58 – ☐ = 9.58** **f) ☐ – ⬡ = 2.41**

g) 48.63 – 15.27 = ☐ **h) 10.00 – ☐ = 2.45** **i) ☐ – ⬡ = 1.22**

1. If you know that the difference between **150** and **72** is **78**, can you immediately write down ten other pairs of numbers that have the same difference?

2. If you know that the difference between **1 020** and **840** is **180**, 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) 787 – 23 = ☐ **b)** 650 – ☐ = 85 **c)** ☐ – ⬡ = 16

d) 450 – 87 = ☐ **e)** 230 – ☐ = 23 **f)** ☐ – ⬡ = 23

g) 160 – 55 = ☐ **h)** 170 – ☐ = 64 **i)** ☐ – ⬡ = 500

4. Calculate these answers as quickly as you can.

a) 270 – 180 = ☐ **b)** 280 – ☐ = 48 **c)** ☐ – ⬡ = 40

d) 560 – 170 = ☐ **e)** 430 – ☐ = 50 **f)** ☐ – ⬡ = 28

g) 285 – 139 = ☐ **h)** 190 – ☐ = 27 **i)** ☐ – ⬡ = 39

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

a) 132.65 – 18.41 = ☐ **b)** 149.13 – ☐ = 15.88 **c)** ☐ – ⬡ = 1.11

d) 162.50 – 18.32 = ☐ **e)** 101.23 – ☐ = 90.00 **f)** ☐ – ⬡ = 2.35

g) 125.37 – 21.24 = ☐ **h)** 46.26 – ☐ = 15.84 **i)** ☐ – ⬡ = 11.98

Answers

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

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

Page 5
1. 63 **2.** 65 **3.** 9 **4.** 1.7 **5.** 64 **6.** 2.4
7. 87 **8.** 80

Page 6
1. 2.8 **2.** 3.7 **3.** 2.6 **4.** 29 **5.** 17 **6.** 125 **7.** 113
8. 525 **9.** 44 **10.** 63 **11.** 715 **12.** 2.5 **13.** 1.9 **14.** 5.1
15. 575 **16.** 239 **17.** 96.2 **18.** 20.8

Page 7
1. 23 **2.** 17 **3.** 9.9 **4.** 31 **5.** 1.8 **6.** 3.6

Page 8
1. 168 **2.** 15 **3.** 125 **4.** 222 **5.** 68 **6.** 231 **7.** 124
8. 154 **9.** 330 **10.** 950 **11. and 12.** Any ten pairs that have a difference of 64 and 48 respectively.

Answers

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1./2. Any ten pairs that have a difference of 14/22. Encourage thinking in patterns.
Eg. add the same amount to each number. So 45 – 31 = 14
Therefore 46 – 32 = 14
47 – 33 = 14 etc.

3. **a)** 57 **b)** 111 **c)** any suitable pairs
d) 22 **e)** 210 **f)** any suitable pairs
g) 107 **h)** 52 **i)** any suitable pairs

4. **a)** 28 **b)** 17 **c)** any suitable pairs
d) 8 **e)** 27 **f)** any suitable pairs
g) 44 **h)** 26 **i)** any suitable pairs

5. **a)** 23.91 **b)** 34.00 **c)** any suitable pairs
d) 9.09 **e)** 14.00 **f)** any suitable pairs
g) 33.36 **h)** 7.55 **i)** any suitable pairs

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1/2. Any ten pairs that have a difference of 78/180. Again, encourage children to think in patterns.
Eg. add the same amount to each number. So 150 – 72 = 78
Therefore 160 – 82 = 78
170 – 92 = 78 etc.

3. **a)** 764 **b)** 565 **c)** any suitable pairs
d) 363 **e)** 207 **f)** any suitable pairs
g) 105 **h)** 106 **i)** any suitable pairs

4. **a)** 90 **b)** 232 **c)** any suitable pairs
d) 390 **e)** 380 **f)** any suitable pairs
g) 146 **h)** 163 **i)** any suitable pairs

5. **a)** 114.24 **b)** 133.25 **c)** any suitable pairs
d) 144.18 **e)** 11.23 **f)** any suitable pairs
g) 104.13 **h)** 30.42 **i)** any suitable pairs