MATHEMATICS

N.S. Yr. 5   P.9

Vocabulary for comparing and ordering numbers.

Equipment

Paper, pencil, ruler.

MathSphere

Concepts

The following words and phrases should be learnt. Children should know what they mean and be able to read and write them, with the correct spelling.

how many,   as many as,   the same number as,   equal to,

more than,   fewer than,   greater than,   less than,

smaller than,   larger than,

most, fewest, greatest, least,   smallest, largest,

order,   first, last,   before, after, next,

between,   half way between,   give or take

Ordinal numbers: *first, second, third, fourth….*

Cardinal numbers: *one, two, three, four….*

(Cardinal numbers indicate quantity, whilst ordinal numbers indicate position.)

> means ' **is greater than' e.g. 4 > 3 or 7 x 8 > 2 x 7**

< means ' **is less than' e.g.   8 < 10 or   2 x 3 < 4 x 4**

(The arrow always points to the smaller quantity.)

Numbers are to be compared and the larger, or largest, decided upon.

When comparing two similar numbers begin the comparison with the most significant digit
                        e.g. **44 385**
            and   **43 997**
begin by comparing the 4 ten thousands, then the 4 and 3 thousands and so on.

COMPARING NUMBERS

1. Which is more: 27 426 or 26 267 ?

2. Which is more: 15 870 or 17 245 ?

3. Which is more: 22 579 or 22 597 ?

4. Which is less: 18 045 or 18 405 ?

5. Which is less: 18 456 or 18 564 ?

6. Which is longer: 23 109 m or 23 019 m ?

7. Which is longer: 34 609 m or 34 096 m ?

8. Which is longer: 70 083 m or 70 038 m ?

9. Which is shorter: 90 981 km or 91 908 km?

10. Which is shorter: 75 427 km or 75 247 km?

11. Is £17 501 a smaller amount than £ 17 051 ?

12. Is £23 556 a larger amount than £ 23 565 ?

13. Is £30 050 less than £30 500 ?

I think I'd rather have £30 500

14. Arsenal had a crowd of 48 705 to watch their football game.
Chelsea had 48 750 watching their match.
Which team had the bigger crowd? By how many?

15. Chris won £38 078 on the lottery.
Mike won £38 178 the next week.
Who won the most?   How much more did he win?

COMPARING NUMBERS

1. Which is more: 42 377 or 24 773 ?

2. Which is more: 65 510 or 65 501 ?

3. Which is more: 29 483 or 29 843 ?

4. Which is less: 20 244 or 20 442 ?

5. Which is less: 10 944 or 10 494 ?

6. Which is longer: 61 067 m or 61 607 m ?

7. Which is longer: 42 760 m or 42 706 m ?

8. Which is longer: 15 505 m or 15 050 m ?

9. Which is shorter: 41 680 km or 4 999 km?

10. Which is shorter: 22 719 km or 22 179 km?

11. Is £76 520 a smaller amount than £ 67 520 ?

12. Is £33 605 a larger amount than £ 33 065 ?

13. Is £27 001 less than £27 010 ?

£27 001 - now that would buy you a pretty good car!

14. A German model railway set was sold for £ 26 495. Another English railway set was sold for £ 26 950. Which was the more expensive? By how much?

15. Last year 11 998 people visited a coastal town on Easter Sunday. On the same day this year 11 989 people visited the same town. Which year had the higher figure? By how many?

NUMBER LINES

1. Show on the number line what number is half way
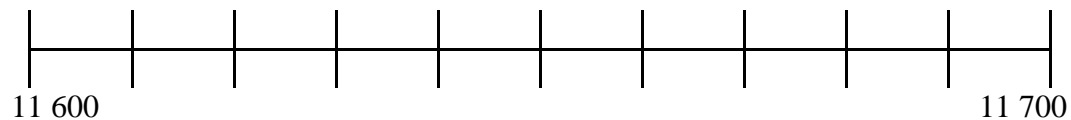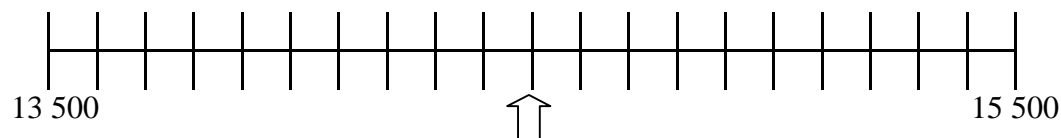   between 26 400 and 27 400.

26 400   27 400
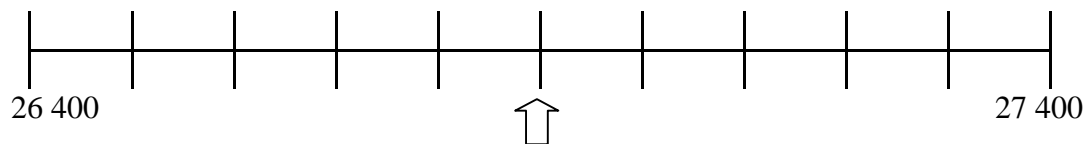
2. Show on the number line what number is half way
        between 11 600 and 11 700.

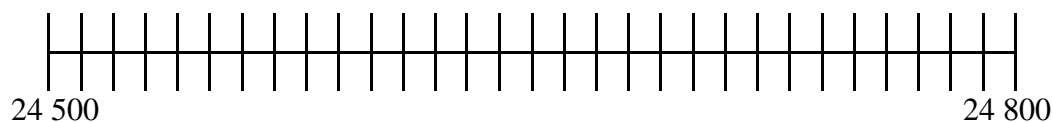11 600   11 700

3. Show on the number line what number is half way
        between 13 500 and 15 500.

13 500   15 500

4. Show on the number line what number is half way
       between 24 500 and   24 800.
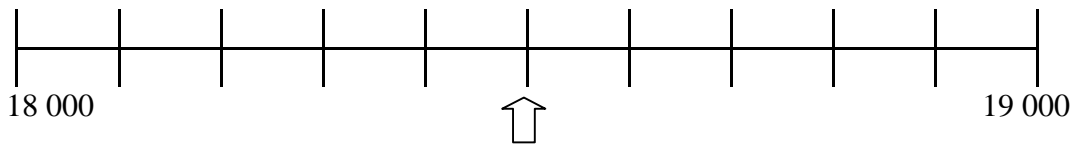
24 500   24 800

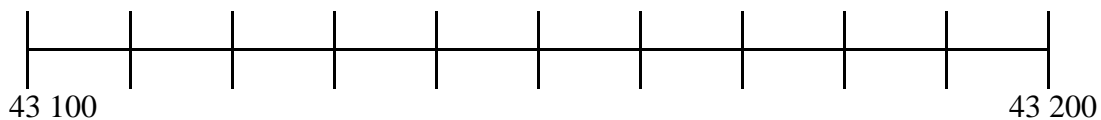**Without using a number line write down what number is half way
between these numbers:**

5. 34 000 and 36 000   **6.** 27 600 and 28 000   **7.** 32 670 and 32 680

8. 40 000 and 41 000   **9.** 80 900 and 81 000   **10.** 63 450 and 63 550

NUMBER LINES

1. On the number line what number is half way between 18 000 and 19 000?

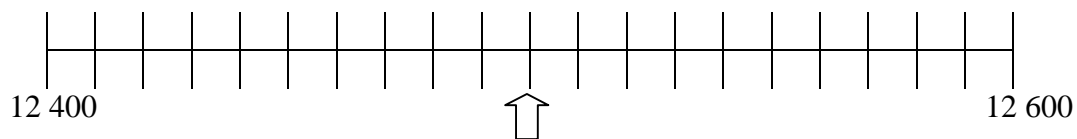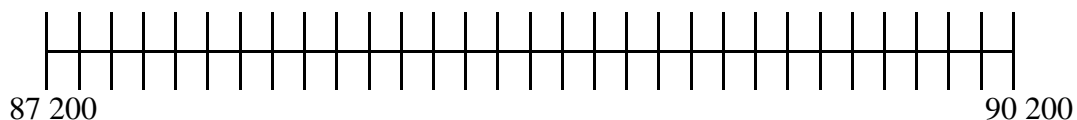18 000   19 000

2. On the number line what number is half way between 43 100 and 43 200.

43 100   43 200

3. Show on the line what number is half way between 12 400 and 12 600.

12 400   12 600

4. Show on the number line what number is half way between 87 200 and 90 200

87 200   90 200

Without using a number line write down what is half way between these numbers:
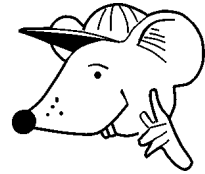
5. 23 400 and 24 000   **6.** 32 600 and 33 000   **7.** 87 800 and 88 000

8. 32 200 and 33 000   **9.** 45 960 and 45 980   **10.** 63 990 and 64 000

11. Manchester United's football ground holds 54 000 spectators. Southampton's ground holds half this number. How many spectators would fill Southampton's ground?
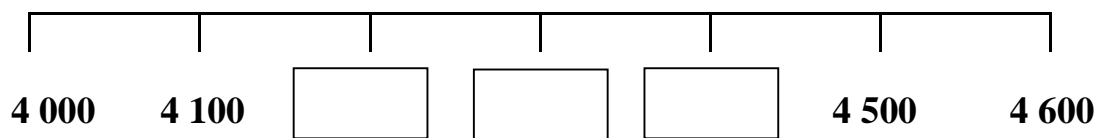
12. Earth has a diameter of approximately 12 800 km. Mars is approximately half the size of Earth. What is the approximate diameter of Mars?
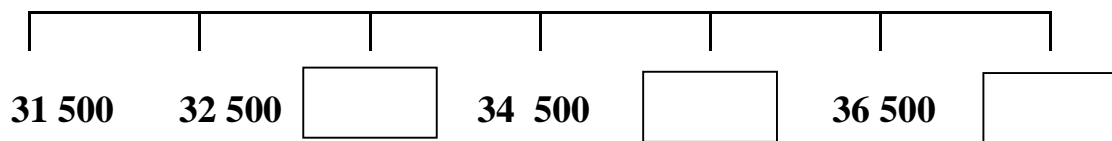
Fill in the missing numbers on these number lines:

> **Check whether the numbers are going up in tens, hundreds or thousands.**

1.

| 4 000 | 4 100 | | | | 4 500 | 4 600 |

2.

| 31 500 | 32 500 | | 34 500 | | 36 500 | |

3.

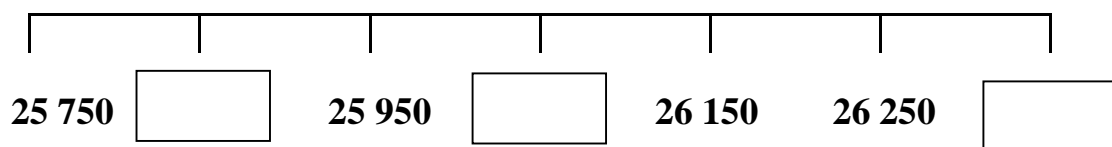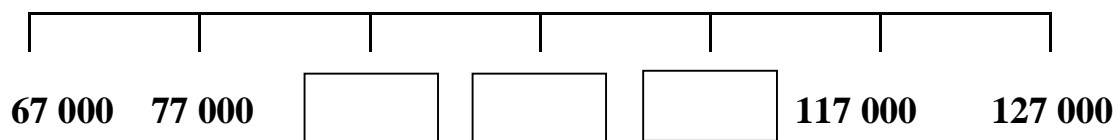| 25 750 | | 25 950 | | 26 150 | 26 250 | |

4.

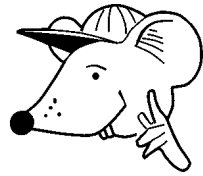| 67 000 | 77 000 | | | | 117 000 | 127 000 |

11. I am half way to being able to afford a house costing £90 000. How much money do I have?

12. Sophie is 1 360 mm tall. Charlotte is 1 460 mm tall. Jenny is half way between the heights of Sophie and Charlotte. How tall is she?

Fill in the missing numbers on these number lines:

> **Are they going up in tens, hundreds or thousands?**

1.

| 10 436 | 10 446 | | | | 10 486 | 10 496 |

2.

| 18 680 | 19 680 | | 21 680 | | 23 680 | |

3.

| 21 080 | | 21 100 | | 21 120 | 21 130 | |

4.

| 67 700 | 67 800 | | | | 68 200 | 68 300 |
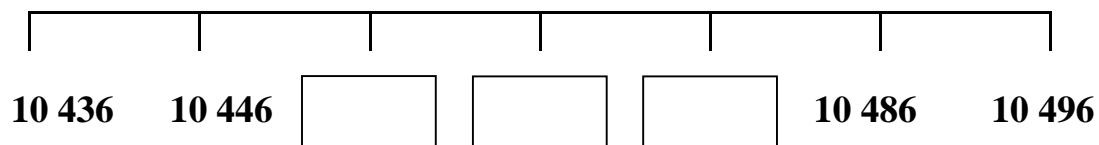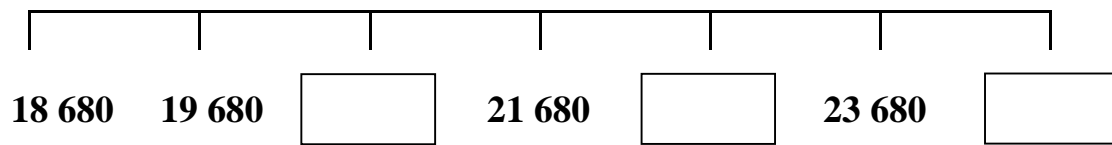
5. Put these numbers in order, largest first:

45 304   45 403   45 034   54 304   54 430

6. Put these numbers in order, smallest first:

15 631   16 315   15 361   16 513   13 651

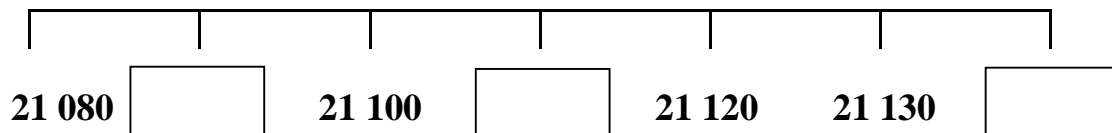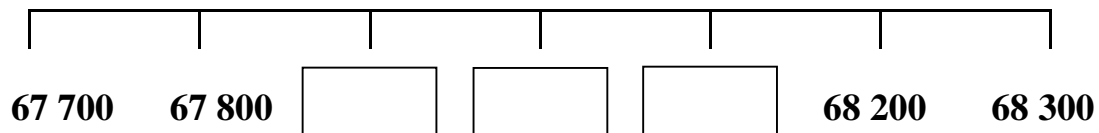**Put these numbers in order, starting with the <u>smallest</u>:**

1.   24 621   42 421   24 146   42 261   24 142

2.   60 060   60 600   60 006   06 006   66 000

3.   15 234   25 341   45 321   35 241   35 142

4.   35 738   35 378   35 387   35 783   35 873

Put these numbers in order, starting with the <u>largest</u>:

5.   13 579   15 379   17 359   19 357   17 935

6.   12 012   12 102   21 120   12 021   21 201

7.   Put these lakes in order of size, starting with the <u>largest</u>:

Lake Huron	59 600 sq km
Lake Superior	82 350 sq km
Lake Michigan	58 000 sq km
Lake Victoria	69 500 sq km
Great Bear Lake	31 800 sq km

More like a sea than a lake!
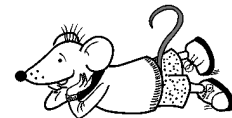
8. If 47 680 < ⬚ < 47 690, list all the whole numbers that ⬚ could be.

9.   TRUE or FALSE ?   43 579 > 44 879

10. TRUE or FALSE ?   21 047 > 12 999

Put the correct sign in the box to make these statements true

11. 62 850 ⬚ 62 580   **12.** 55 555 ⬚ 55 554

13. 59 238 ⬚ 59 257   **14.** 10 177 ⬚ 10 277

<u>Answers</u>

Page 3
   1. 27 426   **2.** 17 245   **3.** 22 597   **4.** 18 045   **5.** 18 456
   6. 23 109 m   **7.** 34 609 m   **8.** 70 083 m   **9.** 90 981 km   **10.** 75 247 km
 11. no   **12.** no   **13.** yes   **14.** Chelsea 45 more   **15.** Mike £100

Page 4
   1. 42 377   **2.** 65 510   **3.** 29 843   **4.** 20 244   **5.** 10 494
   6. 61 607 m   **7.** 42 760 m   **8.** 15 505 m   **9.** 4 999 km   **10.** 22 179 km
 11. no   **12.** yes   **13.** yes   **14.** English set by £455   **15.** Last year, by 9

Page 5
   1. 26 900   **2.** 11 650   **3.** 14 500   **4.** 24 650   **5.** 35 000
   6. 27 800   **7.** 32 675   **8.** 40 500   **9.** 80 950   **10.** 63 500

Page 6
   1. 18 500   **2.** 43 150   **3.** 12 500   **4.** 88 700   **5.** 23 700   **6.** 32 800
   7. 87 900   **8.** 32 600   **9.** 45 970   **10.** 63 995   **11.** 27 000   **12.** 6 400 km

Page 7
 1. 4 200,   4 300,   4 400   **2.** 33 500,   35 500,   37 500
 3. 25 850,   26 050,   26 350   **4.** 87 000,   97 000,   107 000
 5. £45 000
 6. 1 410 mm

Page 8
 1. 10 456,   10 466,   10 476   **2.** 20 680,   22 680,   24 680
 3. 21 090,   21 110,   21 140   **4.** 67 900,   68 000, 68 100,
 5. 54 430,   54 304,   45 403,   45 304,   45 034
 6. 13 651,   15 361,   15 631,   16 315,   16 513

Page 9
 1.   24 142, 24 146, 24 621, 42 261, 42 421
 2. 06 006, 60 006, 60 060, 60 600, 66 000
 3. 15 234, 25 341, 35 142, 35 241, 45 321
 4. 35 378, 35 387, 35 738, 35 783, 35 873
 5. 19 357, 17 935, 17 359, 15 379, 13 579
 6. 21 201, 21 120, 12 102, 12 021, 12 012
 7. Superior, Victoria, Huron, Michigan, Great Bear
 8. all numbers between 47 681 and 47 689 inclusive **9.** false   **10.** true
 11. 62 850 > 62 580   **12.** 55 555 > 55 554
 13. 59 238 < 59 257   **14.** 10 177 < 10 277