Finding median and range
Example 1

Given a list of numbers 2, 4, 6, 7, 8, 3.
Find (a) the median   (b) the range

(a) Arrange starting with the smallest =   2, 3,   4, 6,   7, 8
    Match up to get the median.
    Two numbers 4 and 6 are in the middle.

Find the average of the two middle numbers **4 and 6** $= (\frac{4+6}{2}) = \frac{10}{2} = 5$
The median is 5.
(b) The difference between the largest and the smallest number in the
     given list is the **Range. Range = 8 - 2 = 6**

Example 2

The median of 7 consecutive integers is -2.

(a) Which are the integers   (b)   Find their range.
                                                    M
(a) Show the median (M) of 7 integers

     Next, complete the set as {$^-$5, $^-$4, $^-$3, $^-$2, $^-$1, 0, 1}

(b) Their range is   (1) $-$ ($^-$5) $=$ 1 $+$ 5   or   6

Exercise 8:6
Find the median and the range of the following.

1. 20, 30, 60, 40, 50

2. 5, 4, 5, 6, 7, 2

3. $^-$2, 4, 2, 0, 3, 2,   4

4. $^-$1, 0, 1, 2, 4, $^-$3

5. 4, 5, 6, 7, 8, 7, 8,   5

6. 3, 3, 7, 8, 4, 5, 7,   8

7. 19, 20, 13, 14, 16, 15, 21

8. 30, 40, 50, 30, 40, 60, 70, 30

9. 33, 38, 34, 36, 37, 35

10. The median of **5** consecutive positive integers is $^+$6.
     (i)   What are the numbers?   (ii)   Find their range.

11. The median of **7** consecutive negative integers is $^-$8.
     (i)   What are the numbers?   (ii)   Find their range.

12. The median of **7** consecutive integers is **8**. If the smallest is **5**, what is
     their range?

13. The range of consecutive integers is **6**. The smallest number is
     $^-$2, what is the median of the numbers?