



# MATHEMATICS



**N.S. Yr. 3 P.17**

**Estimation and approximation**

## Equipment

Paper, pencil, ruler

# MathSphere

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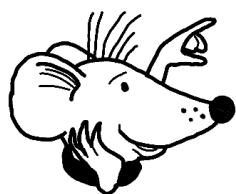
## **Concepts**

In year three children will continue to make estimates of numbers and measurements, usually up to about 100. This could involve the number of marbles in a jar, counters in a pile, lines on a page, words in a paragraph etc and a great deal of practice at estimating can be done in the outside environment.

The main development in year three is to estimate a number along a blank number line, using different scales up to 100. There are several examples of this in the module, using different lengths and scales for the number line. This kind of estimating can prove to be quite difficult.

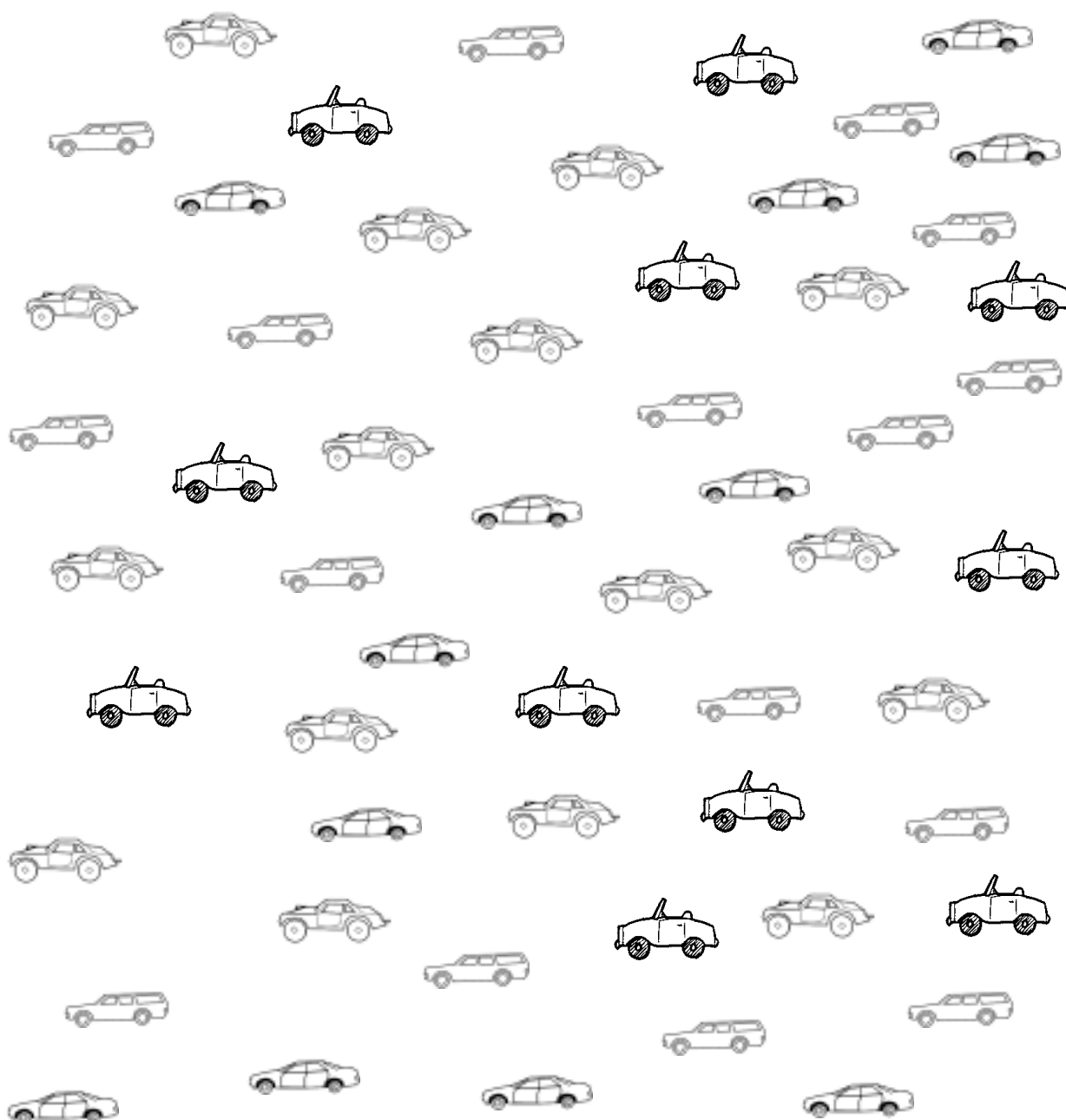
Once again, it is important to question the child as to how they decided where to place the arrow or number- using language such as: 'close to half way' , approximately, roughly etc.

### Estimate the number of cars



Have a quick look at this page and estimate the number of cars.

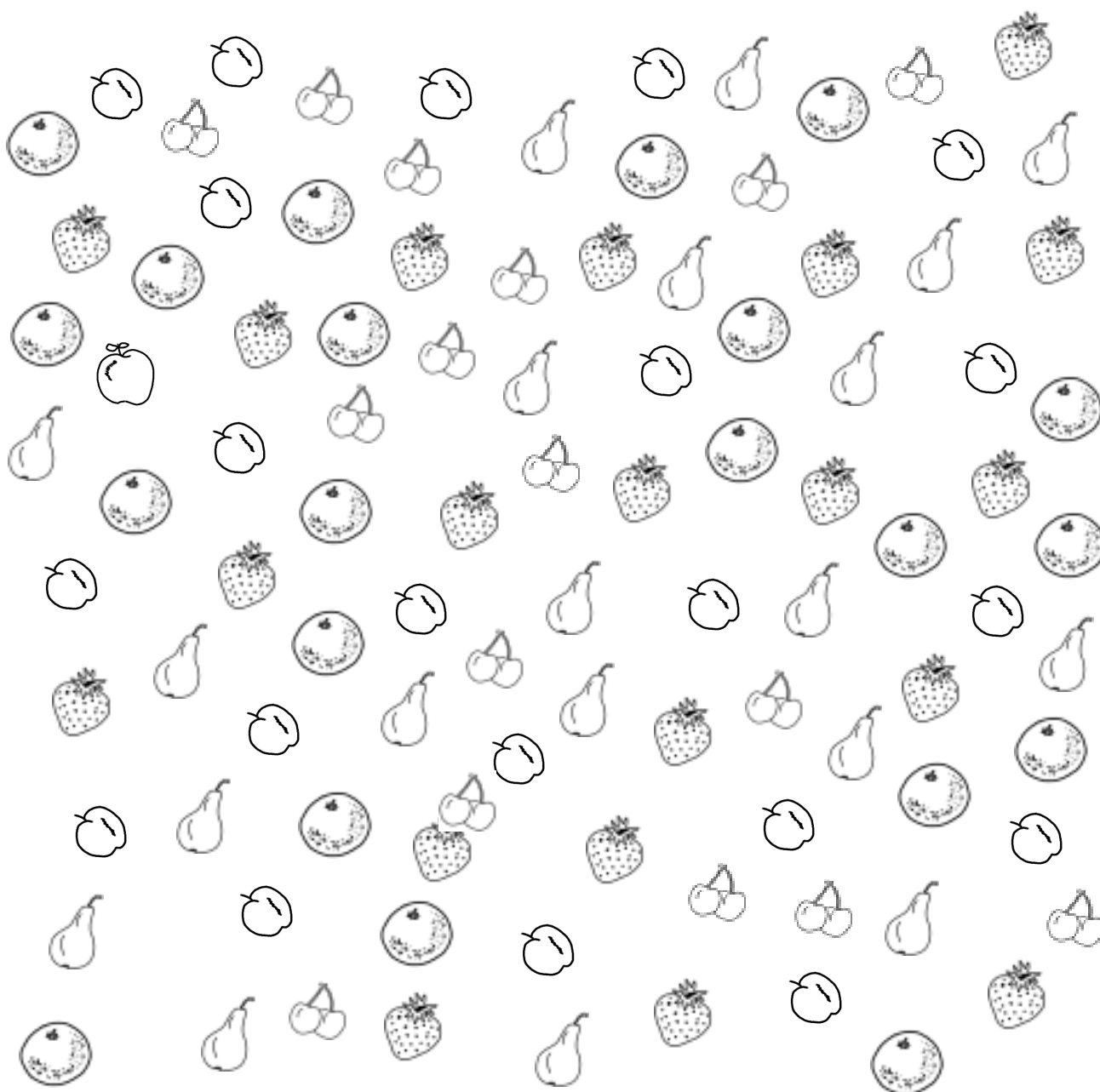
**Do Not Count** - just have a quick guess!



**Estimate the number of cars**

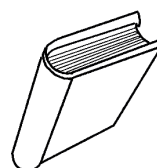
Have a quick look at this page and estimate the number of pieces of fruit.

**Do Not Count** - just have a quick guess!



**How many pages in a book?**

Look at how thick the pages of a book are.  
Now guess how many pages there are in the book.



Mmm! I think  
about 100 pages.

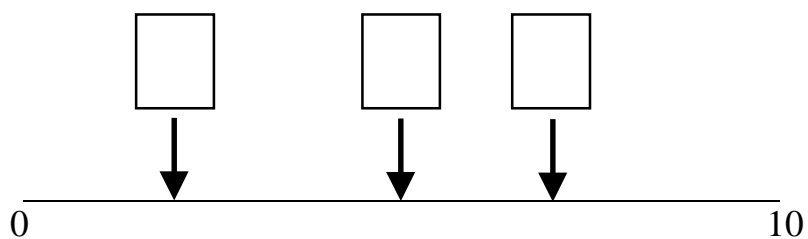
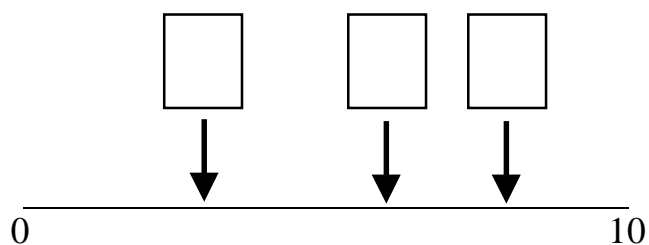
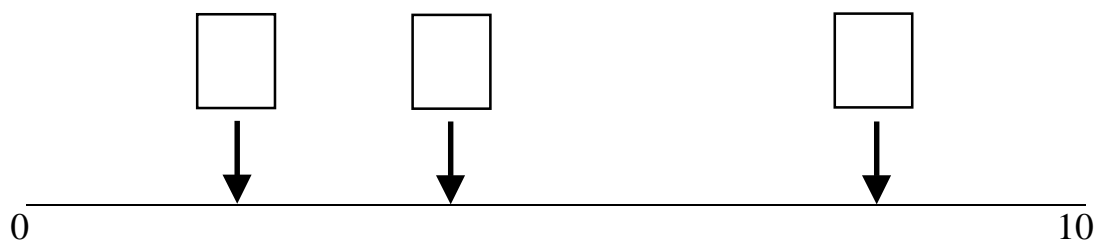
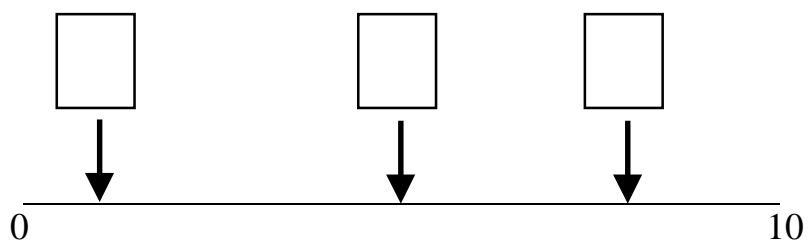
Write your estimate down and then check.

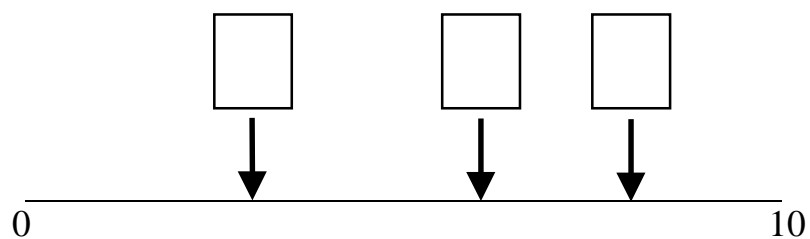
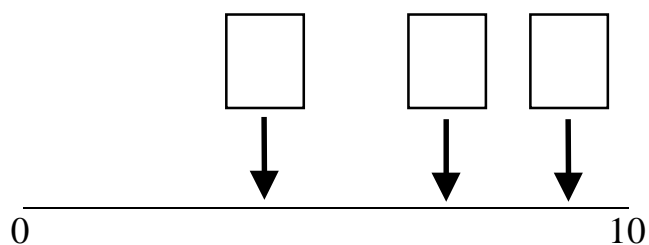
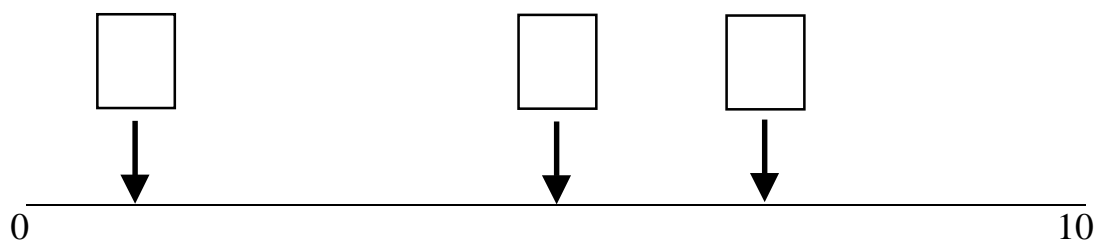
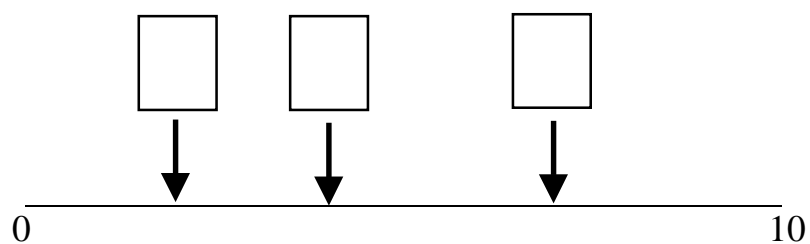
Do this for at least six other books.

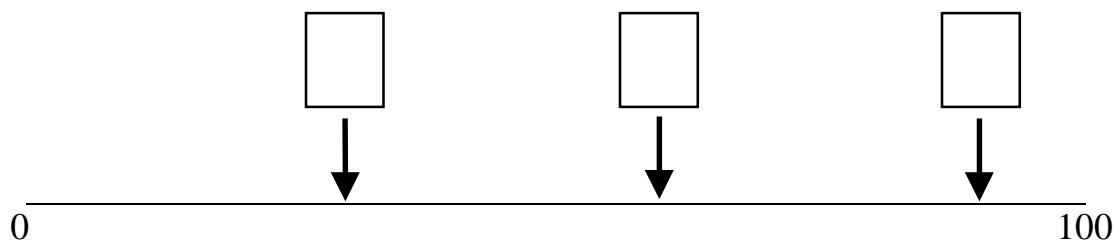
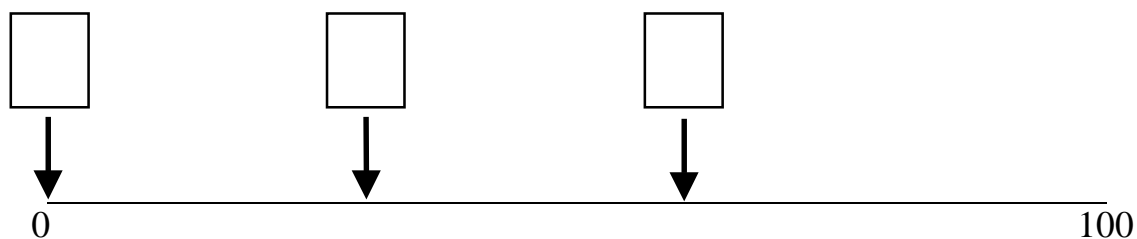
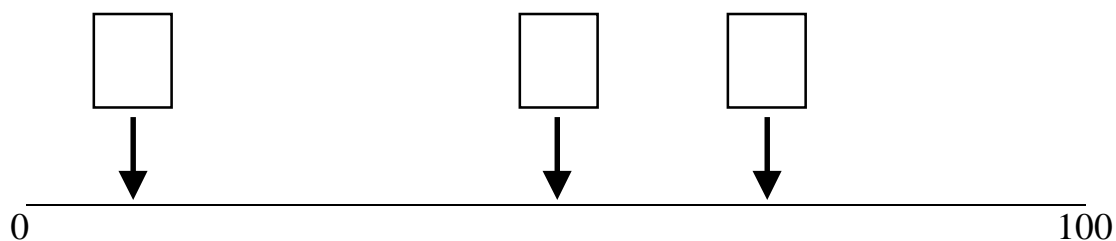
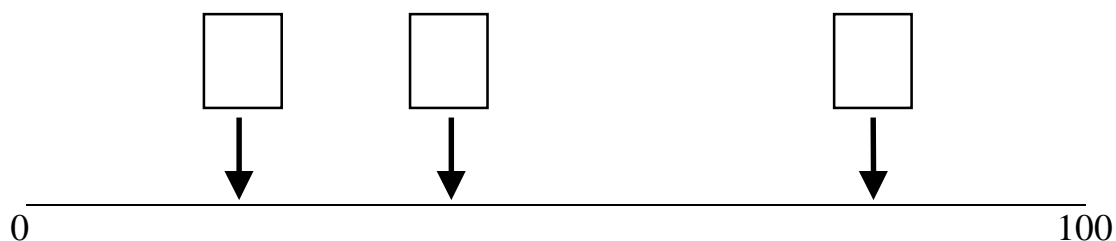
Write your estimates and check in the table below.

Title of book	Estimate of pages	Number of pages

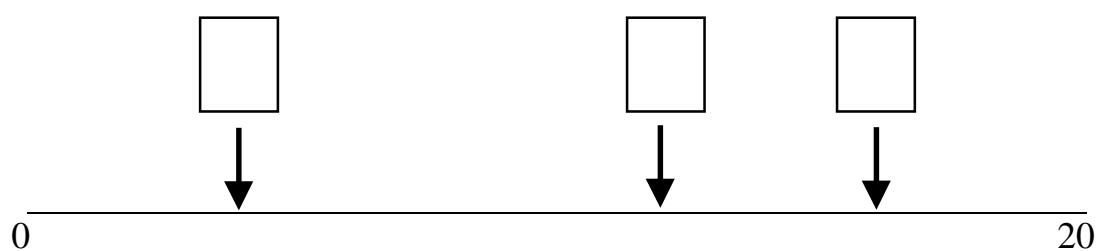
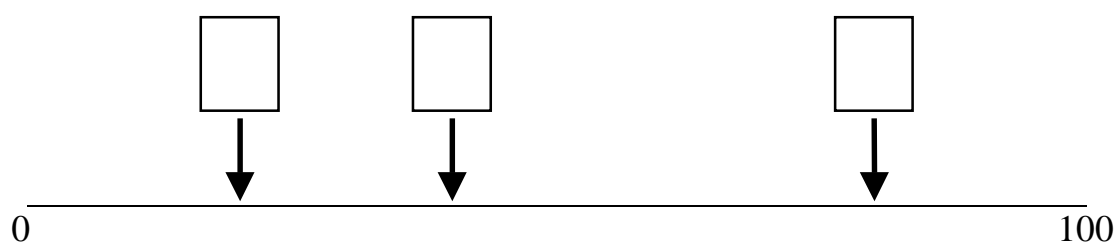
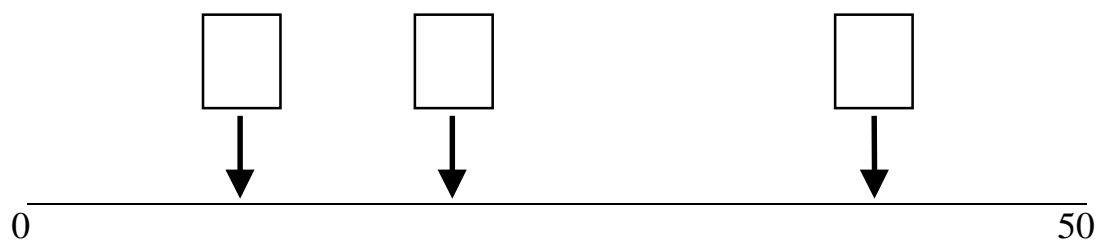
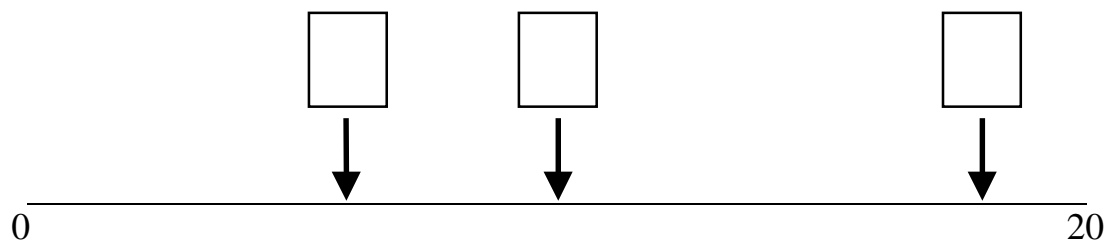
**Did your estimates get better?**

**Estimate on a number line****Write the estimated numbers in the boxes**

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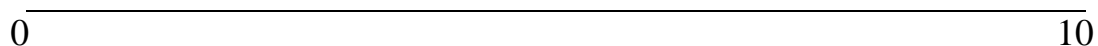
**Estimate on a number line****Write the estimated numbers in the boxes**



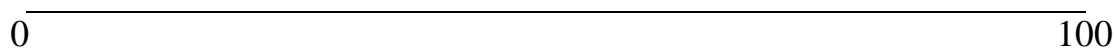
**Estimate on a number line****Write the estimated numbers in the boxes**

**Marking a number line**

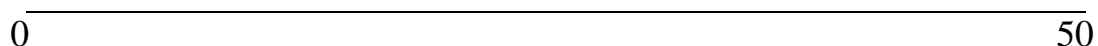
Draw arrows to show where 4, 6 and 8 are on the number line.



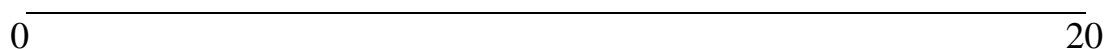
Draw arrows to show where 30, 40 and 70 are on the number line.



Draw arrows to show where 10, 25 and 40 are on the number line.

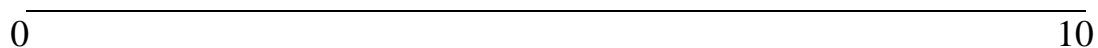


Draw arrows to show where 2, 12 and 18 are on the number line.

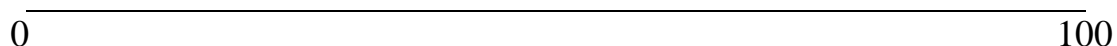


**Marking a number line**

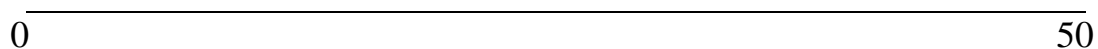
Draw arrows to show where 3, 5 and 7 are on the number line.



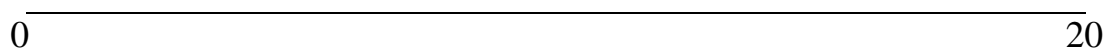
Draw arrows to show where 20, 60 and 80 are on the number line.



Draw arrows to show where 20, 35 and 45 are on the number line.



Draw arrows to show where 4, 15 and 19 are on the number line.



**Answers****Page 3**

Between 50 and 60

**Page 4**

About 100

**Page 6**

1. 1, 5, 8      2. 2, 4, 8      3. 3, 6, 8      4. 2, 5, 7

**Page 7**

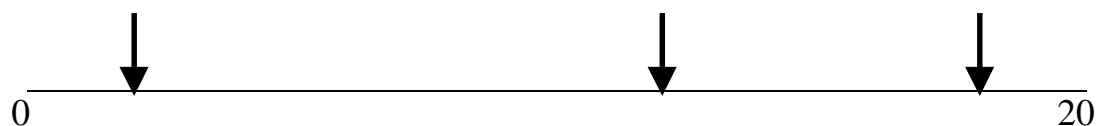
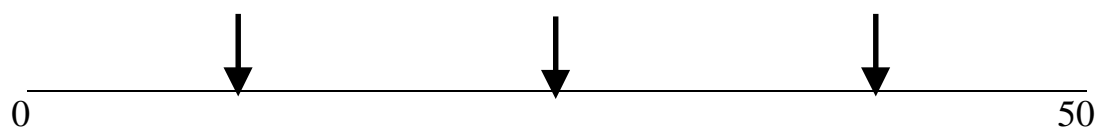
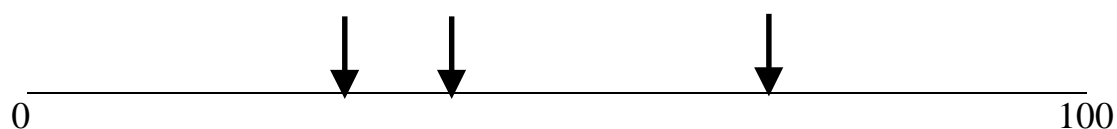
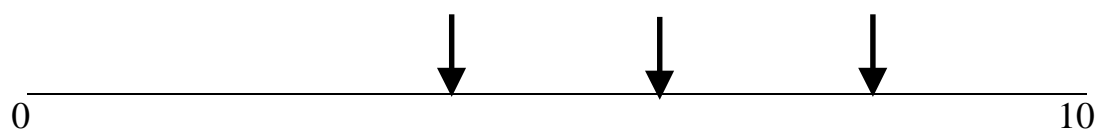
1. 2, 4, 7      2. 1, 5, 7      3. 4, 7, 9      4. 3, 6, 8

**Page 8**

1. 20, 40, 80      2. 10, 50, 70      3. 0, 30, 60      4. 30, 60, 90

**Page 9**

1. 6, 10, 18      2. 10, 20, 40      3. 20, 40, 80      4. 4, 12, 16

**Page 10**

Answers cont.

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