CHAPTER 1

Exercise 1 Decimal Places & Rounding

1. Round each of the following to **one** decimal place :-

   a 8·63 **b** 3·77 **c** 9·051 **d** 2·949

   e 11·123 **f** 54·96 **g** 0·0612 **h** 99·97.

2. Round each of the following to **two** decimal places :-

   a 1·768 **b** 12·125 **c** 7·706 **d** 9·0052

   e 3·04399 **f** 0·01517 **g** 99·987 **h** 99·999.

3. Round each of these numbers to the number of decimal places in the brackets :-

   a 7·845 (2) **b** 3·1903 (1) **c** 51·542 (2) **d** 5·87654 (3).

4. **a** Share £8000 equally between 6 people.
   How much can each person get ?

   b Share one million pounds equally between 9 people.
   How much can each person get ?

   c How much will each person get if you share £$10\frac{1}{4}$ million between 7 people ?

5. Find three places in real life where rounding to decimal places is used.

Exercise 2 Significant Figures & Rounding

1. Round each of the following to **one** significant figure :-

   a 654 **b** 9126 **c** 7551 **d** 2741

   e 14·1 **f** 26·033 **g** 0·0612 **h** 0·96.

2. Round each of the following to **two** significant figures :-

   a 5412 **b** 34754 **c** 54370 **d** 90052

   e 2·7641 **f** 0·07654 **g** 19·517 **h** 99·99.

3. Round each of these numbers to the number of significant figures in the brackets :-

   a 7845 (2) **b** 31903 (1) **c** 34235 (2) **d** 4·03654 (4).

4. How many significant figures has the number 200400 been rounded to ?

5. The attendance at a football match was reported as 43000 (rounded to two significant figures).

   What was the :-

   a maximum number of supporters at the match ?

   b minimum number of supporters ?

Exercise 3 Estimating using Significant Figures

1. Round each number to **one significant figure** to estimate each calculation :-

   a 4531 + 235 **b** 76854 + 390 **c** 45632 - 3271 **d** 332165 - 156780

   e 98 x 19 **f** 104 x 48 **g** 385 x 38 **h** 12476 x 348

   i 297 ÷ 18 **j** 3541 ÷ 82 **k** 45621 ÷ 488 **l** 8502345 ÷ 2870.

2. Round each number to **one significant figure** to estimate each calculation :-

   a 8762 + 4307 x 208 **b** 54123 - 390 x 132

   c 869 + 5086 ÷ 458 **d** 5802 - 783709 ÷ 22444.

3. Round each number to **one significant figure** to estimate each calculation :-

   a There are three thousand two hundred and fifty gallons of oil in an oil truck.

   How many gallons would there be in 105 trucks ?

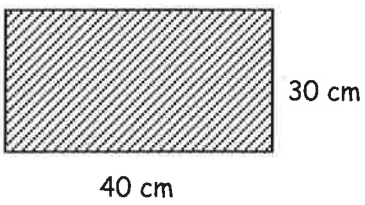
   b 

   Six hundred and forty eight thousand cat treats are equally shared into thirty four thousand bags.

   How many cat treats are in each bag ?

   c The rectangle shown has its length and breadth rounded to one significant figure.

   Use a **calculator** to find the difference between the **maximum** and **minimum** possible areas, assuming **whole** numbers only are used.



Revisit - Review - Revise Exercise 1

1. Round each of these numbers to the number of **decimal places** in the brackets :-

   a 6·7513 (1) **b** 13·903 (2) **c** 49·95 (1) **d** 14·80552 (3).

2. Round each of these numbers to the number of **significant figures** in the brackets :-

   a 6543 (1) **b** 896 575 (2) **c** 77·05 (1) **d** 11·764 51 (3).

3. Round each number to **one significant figure** to estimate each calculation :-

   a 6512 + 7651 **b** 3165 + 78 **c** 5691 - 4502 **d** 45 713 - 16 078

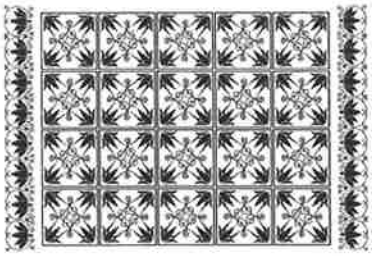
   e 78 x 29 **f** 807 x 31 **g** 654 x 54 **h** 13 813 x 789

   i 852 ÷ 26 **j** 5514 ÷ 557 **k** 87 745 ÷ 341 **l** 3 512 412 ÷ 2431.

4. Rounded to one significant figure the number of carpets in a container is 8000.

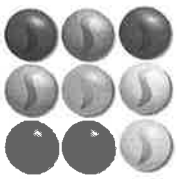
   a What is the **maximum** number of carpets in the container ?

   b What is the least number of carpets ?



5. One million marbles are put into packets of nine.

   This will be 111 112 full packets. Is this true ? Explain.



Non-Calculator Ex 1

1. Find :- **a** 147 + 387 **b** 1254 - 976 **c** 1205 + 9976

   d 24 124 - 9000 **e** 8000 - 1754 **f** 236 x 7

   g 1205 x 4 **h** 1685 ÷ 5 **i** 20 405 x 5.

2. Calculate :- **a** 143 x 10 **b** 302 x 100 **c** 1000 x 165

   d 12 000 ÷ 100 **e** 10 200 ÷ 10 **f** 5 million ÷ 1000.

3. Find :- **a** 143 x 20 **b** 418 x 400 **c** 507 x 500

   d 42 500 ÷ 500 **e** 24 600 ÷ 20 **f** 1 370 000 ÷ 5000.

4. Calculate :- **a** $\frac{1}{3}$ of 81 kg **b** $\frac{1}{5}$ of 155 m **c** $\frac{1}{19}$ of 1900

   d $\frac{2}{3}$ of 267°C **e** $\frac{2}{5}$ of £7500 **f** $\frac{11}{13}$ of 260 km.