Rounding

Rounding to 10, 100, 1000, 10 000 ...

Look at the next most significant digit after the one to which you are rounding.
If it is 5 or more, round up.

Example **367 488** to the nearest hundred thousand is 400 000
to the nearest thousand is 367 000
to the nearest ten is 367 490.

Rounding to decimal places

- Keep the number of digits asked for after the decimal point.
- The rest will be deleted but before deleting them look at the first digit being deleted.
  If it is 5 or more then add one to the last digit being kept.

Example

7.4712 = 7.5 **(1 d.p.)**
46.0543 = 46.05 **(2 d.p.)**
25.399 = 25.40 **(2 d.p.)**

This digit is more than 5 so it gets rounded up.

Rounding to the nearest whole number is the same as rounding to 0 d.p.

CHECK UP 2

1. This table gives the area of some of the world's islands.

a) Round each to the nearest 10 000.

b) Put the islands in order from largest to smallest.

_____

_____

_____

_____

_____

Island	Area in miles^2	Rounded to nearest 10 000
Honshu	87 799	
Great Britain	84 195	
Sumatra	104 990	
Greenland	839 852	
Baffin Island	195 916	

2. **a)** Round 68 923 417 to the nearest

i) ten thousand _____ **ii)** hundred _____

b) Round 796 429 to the nearest

i) hundred thousand _____ **ii)** million _____

3. Round these to 1 or 2 decimal places as indicated.

a) 16.357 (2 d.p.) _____ **b)** 0.155 (1 d.p.) _____

c) 0.306 (2 d.p.) _____ **d)** 9.015 (1 d.p.) _____

e) 106.405 (2 d.p.) _____ **f)** 54.398 (2 d.p.) _____

g) 4.002 (1 d.p.) _____ **h)** 16.998 (2 d.p.) _____

Pie charts

A **pie chart** shows the proportion in each category.

Example Out of 300 pupils at Redbrook International School
100 bike to school
65 walk to school
60 come by car
75 come by bus.

A pie chart has a 360° angle at the centre.
To draw a pie chart

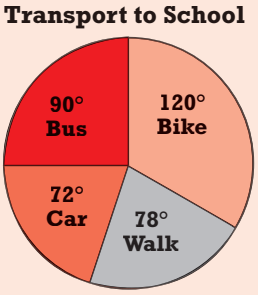
- work out the fraction for each category (e.g. each way of coming to school)
- find the fraction of 360° for each
- divide the circle into these angles using a protractor.

Bike $\frac{100}{300} \times 360° = 120°$

Walk $\frac{65}{300} \times 360° = 78°$

Car $\frac{60}{300} \times 360° = 72°$

Bus $\frac{75}{300} \times 360° = 90°$



CHECK UP 19

1. This table show how Jake spent the last 24 hours

Activity	Sleeping	Playing Sport	Watching TV	Eating	Friends
Hours	9	5	2	1	7

He wanted to draw a pie chart.
Fill in the missing numbers to calculate the angles of the sectors.

Sleeping $\frac{9}{24} \times 360° = 135°$

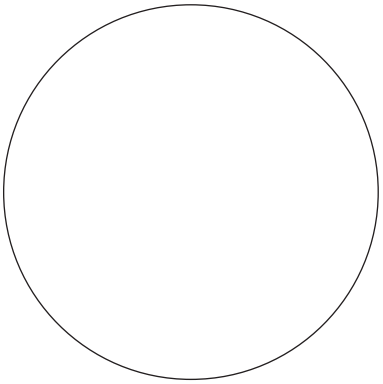
Playing sport $\frac{5}{24} \times 360° =$ _____ °

Watching TV $\frac{2}{\_\_} \times 360° =$ _____ °

Eating $\frac{\_\_}{\_\_} \times 360° =$ _____ °

Friends $\frac{\_\_}{\_\_} \times$ _____ = _____ °

Show Jake's information on a pie chart.



2. This table shows the grades 120 students got in a test.

Grade	A	B	C	D
Number of Students	24	58	33	5

Show this information on a pie chart.