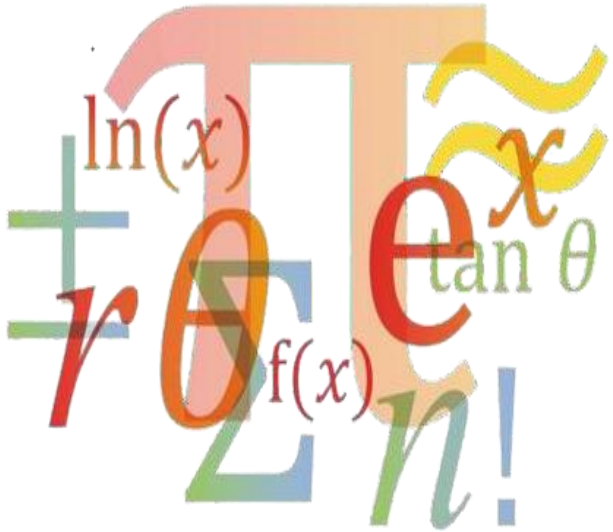
Cambridge Assessment International Education

Checkpoint 3

Chapter: 8

Rounding



LO: To be able to round decimals to 2 and 3 d.p. and to the given number of s.f

Starter:

1 Round the following numbers to the nearest 10.

a 34 b 86 c 3467 d 397

2 Round the following numbers to the nearest 100.

a 482 b 709 c 3467 d 19,952

3 Round the following numbers to the nearest 1000.

a 8660 b 23,251 c 351,874 d 999,999

LO: To be able to round decimals to 2 and 3 d.p. and to the given number of s.f

1	Round the following numbers to the nearest 10.						
	a	34	b	86	c	3467	d	397
		30		90		3470		400
2	Round the following numbers to the nearest 100.						
	a	482	b	709	c	3467	d	19,952
		500		700		3500		20,000
3	Round the following numbers to the nearest 1000.						
	a	8660	b	23,251	c	351,874	d	999,999
		9000		23,000		352,000		1,000,000

Rounding Decimals

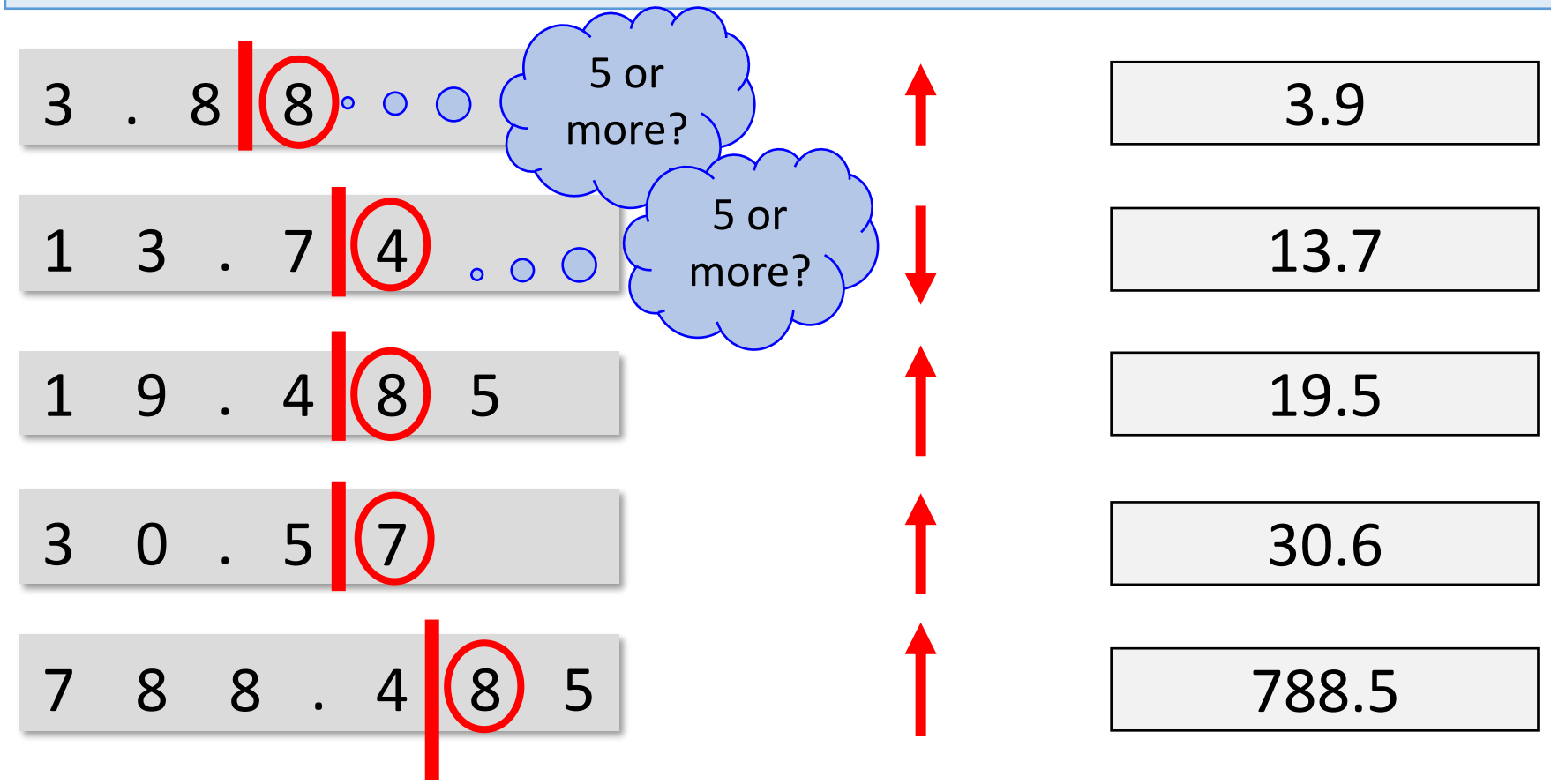
Example 1:

Round the following numbers to the nearest Whole Number

3 . 8 ...	5 or more?	4
1 3 . 7 ...	5 or more?	14
1 9 . 4 8 5		19
3 0 . 5		31
7 8 8 . 4 8 5		788

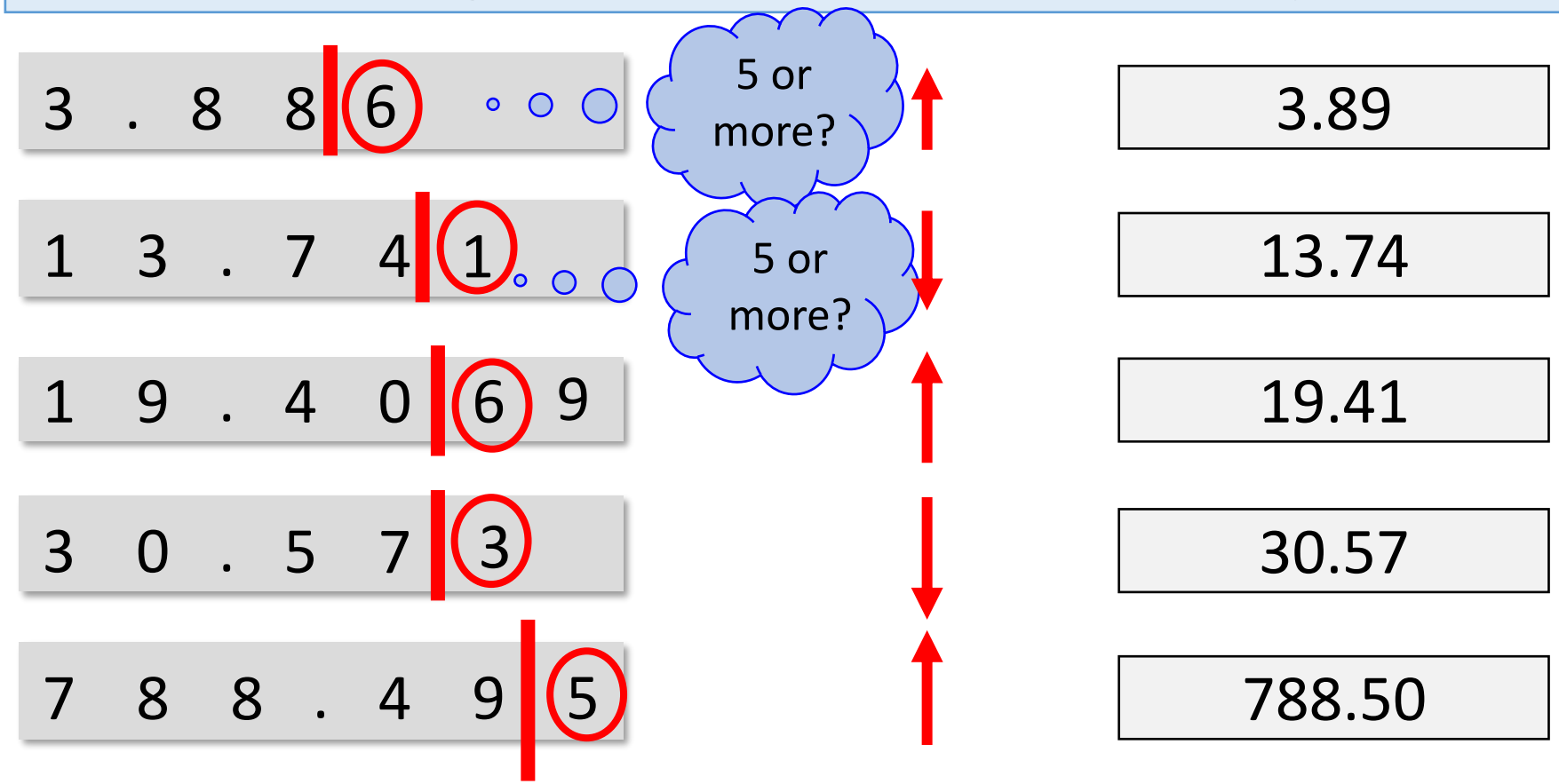
Rounding Decimals

Round the following numbers to the nearest 1 decimal place



Rounding Decimals

Round the following numbers to the nearest 2 decimal places



Rounding Decimals

We can use rounding to help us estimate answers

Example – Estimate 3.99 × 4.8

$$3.99 \times 4.8$$

$$4 \times 5 = 20$$

How should we round this to make it easiest?

Ex: 4

Estimate the answer to each of these:

Make it as SIMPLE as possible

a 6.7×4.3

b 12.7×2.05

c 2.9×9.5

d 7.1×8.6

e 4.3×8.8

f 5.7×5.7

g 2.6×3.3

h 8.91×5.03

i 6.8×7.6

j 7.59×6.87

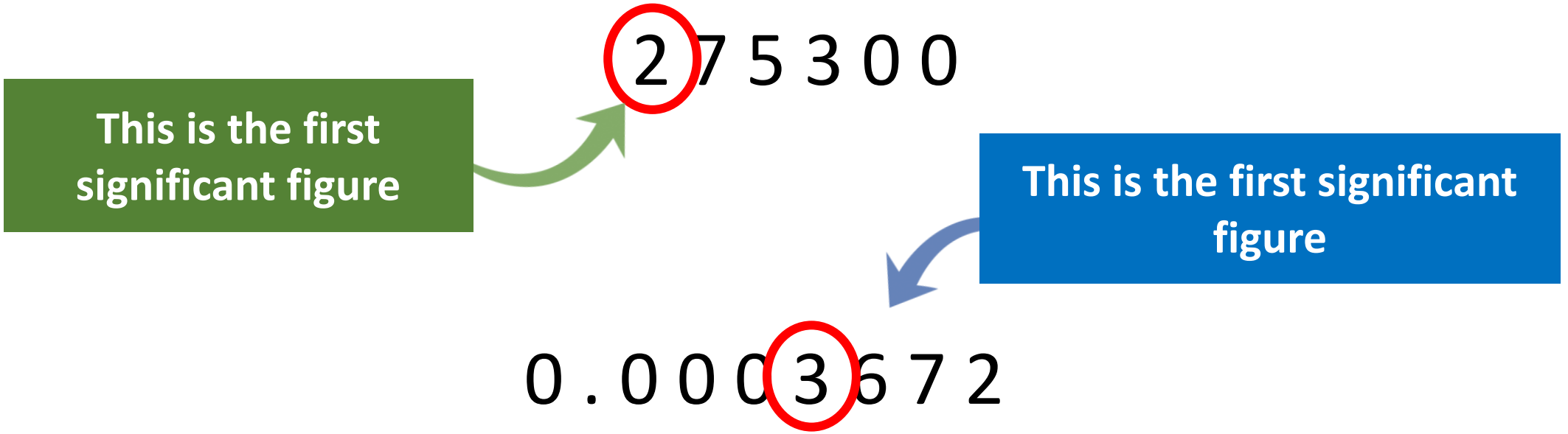
Ex: 4

Estimate the answer to each of these:

Make it as SIMPLE as possible

a 6.7×4.3	28	b 12.7×2.05	30
c 2.9×9.5	30	d 7.1×8.6	63
e 4.3×8.8	36	f 5.7×5.7	36
g 2.6×3.3	9	h 8.91×5.03	45
i 6.8×7.6	56	j 7.59×6.87	56

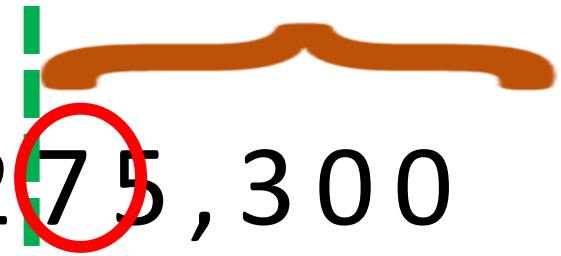
Numbers can be rounded to a given number of significant figures



The first significant figure is the first **non-zero** number

Round 275300 to 1 significant figure

This is the first significant figure



275,300

Round up or stay the same?

Round up!

300,000

Ex: 5

Number	To 3 s.f.	To 2 s.f.	To 1 s.f.
4213			
6435			
23.65			
43.89			
0.0465			
0.009231			
0.9649			
0.4054			
0.07008			
0.4109			
0.005007			

Number	To 3 s.f.	To 2 s.f.	To 1 s.f.
4213	4210	4200	4000
6435	6440	6400	6000
23.65	23.7	24	20
43.89	43.9	44	40
0.0465	0.0465	0.047	0.05
0.009231	0.00923	0.0092	0.009
0.9649	0.965	0.96	1
0.4054	0.405	0.41	0.4
0.07008	0.701	0.70	0.07
0.4109	0.411	0.41	0.4
0.005007	0.00501	0.0050	0.005

Estimating using Significant Figures

Round to 1 sf

Round to 1 sf

$$\frac{36 \times 22}{2.37}$$

Round to 1 sf

$$\frac{40 \times 20}{2} = \frac{800}{2} = 400$$