Significant Figures

Rules

- All non-zero integers are significant.

- Zeros that occur between non-zero integers are significant, e.g. 507 has three significant figures.

- Zeros that occur after the last non-zero integer and after the decimal point are significant, e.g. 2.000 has four significant figures.

- Zeros that occur after the last non-zero integer in a whole number are not significant because they are just used as place value holders, e.g. 500 has one significant figure.

- Zeros that occur before non-zero integers and after the decimal point are not significant because they are just used as place value holders, e.g. 0.0058 has two significant figures.

Exercises

1. How many significant figures are in the following?

(a)	4.05		(f)	0.0025
(b)	17.00		(g)	460000000
(c)	0.00625		(h)	65.003
(d)	36000		(i)	0.30806
(e)	183.66		(j)	327.0

2. Round to 3 significant figures:

(a)	2549		(d)	92.985
(b)	0.107235		(e)	0.00264451
(c)	92.362			

3. Round to 2 significant figures:

(a)	2377956		(d)	8331700
(b)	0.0004228		(e)	2.54
(c)	0.04785			

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Answers

1.

(a)	3	(f)	2
(b)	4	(g)	2
(c)	3	(h)	5
(d)	2	(i)	5
(e)	5	(j)	4

2.

(a)	2550	(d)	93.0
(b)	0.107	(e)	0.00264
(c)	92.4		

3.

(a)	2400000	(d)	8300000
(b)	0.00042	(e)	2.5
(c)	0.048		