

Q1. (a) Find the square of 6.

..... (1)

(b) Find the square root of 225.

..... (1)

(c) Find the value of 10^3 .

..... (1)
(Total 3 marks)

Q2. (a) Work out the square of 3

..... (1)

(b) Work out the value of 2^6

..... (1)

- (c) Write 80% as a fraction.
Give your answer in its simplest form.

..... (2)

- (d) Work out 10% of £320

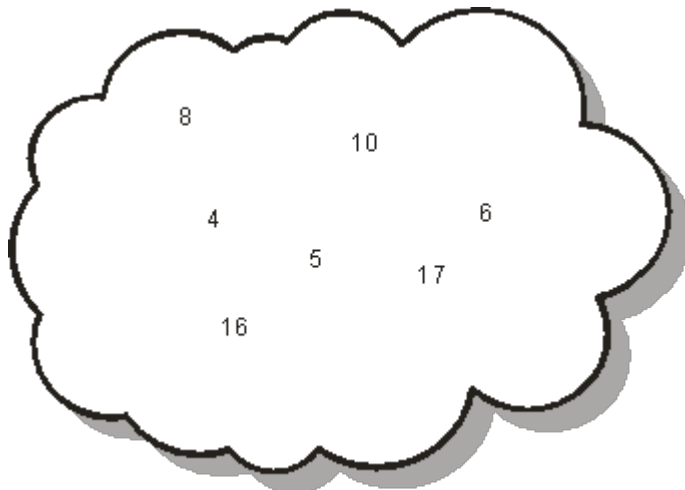
£ (2)

- (e) Write these numbers in order of size.
Start with the smallest number.

$$\frac{2}{5} \quad 45\% \quad 0.35 \quad \frac{3}{8}$$

..... (2)
(Total 8 marks)

Q3.



Using only the numbers in the cloud, write down

(i) an odd number

.....

(ii) a multiple of 4

.....

(iii) two numbers which have a sum which is a prime number

.....

(iv) the value of 2^3

.....

(Total 4 marks)

M1.

	Answer	Mark	Additional Guidance
(a)	36	1	B1 cao accept answer in words, ignore spelling
(b)	15	1	B1 cao accept answer in words, ignore spelling
(c)	1000	1	B1 cao accept answer in words, ignore spelling
Total for Question: 3 marks			

M2.

	Answer	Mark	Additional Guidance
(a)	9	1	B1 cao
(b)	64	1	B1 cao
(c)	$\frac{4}{5}$	2	B2 for $\frac{4}{5}$ (B1 for 80/100 oe or 0.8)
(d)	£32	2	M1 for $10/100 \times 320$, or $320 \div 10$ A1 cao NB: £320-£32=£288 or £320+£32=£352 can be awarded M1 A1 , but £288 or £352 without working award B1
(e)	0.35, $\frac{3}{8}$ $\frac{2}{5}$, 45%	2	B2 all correct, or for equivalents in order: 0.35, 0.375, 0.4, 0.45, or for a mixture of equivalents as long as the order is correct. (B1 one error of misplacing numbers, or correct conversion to decimals or %, or correct order but reversed). NB: accept 0.38 or 0.37 instead of 0.375 for B1 , but not B2
Total for Question: 8 marks			

M3.

	Working	Answer	Mark	Additional Guidance
(i)		5 or 17	1	B1 5 or 17 or both
(ii)		4, 8, or 16	1	B1 for one, two or three of 4, 8 or 16
(iii)		5 and 6	1	B1 5 and 6 oe
(iv)		8	1	B1 cao
				Total for Question: 4 marks

E1. This question tested whether candidates understood the concept of powers and roots. Whilst 67% could find the square of 6 only 43% could find the square root of 225 and even fewer (41%) could find the value of 10^3 . This was an indication of the size of the lack of calculator problem.

E2. The success rate in parts (a) & (b) in this question was related to that of question 2(ii), about half the candidates gaining the mark, with many lacking an understanding of square numbers or indices. In part (c) most were able to express the fraction as $\frac{80}{100}$, but of these half were then unable to cancel the fraction into its simplest form.

Candidates used a variety of methods in part (d), with many realising that a division by 10, or "10p in the £" would lead to the correct answer.

Candidates found part (e) far more challenging. The most successful method appeared to be conversion to decimals.