

Q1. Here is a list of numbers.

3 8 11 25 33 41

Write down a number from the list which is

(a) an even number,

.....

(1)

(b) a square number,

.....

(1)

(c) a multiple of 11

.....

(1)

(Total 3 marks)

Q2. Here is a list of eight numbers

4 5 25 29 30 33 39 40

From the list, write down

(i) a factor of 20

.....

(ii) a multiple of 10

.....

(iii) the prime number that is greater than 15

.....

(Total 3 marks)

Q3. Here is a list of numbers.

2	4	8	12	16	20	32	40
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From the list,
write down all the numbers which are **not** factors of 32

.....

(Total 2 marks)

Q4. Here is a list of numbers.

2 4 5 6 7 8

From the list of numbers write down

(i) an odd number

.....

(ii) a square number

.....

(iii) a multiple of 3

.....

(iv) a factor of 10

.....

(Total 4 marks)

Q5. Here is a list of 8 numbers.

3 5 6 8 9 10 11 16

From the list, write down

(a) **two** odd numbers,

..... and

(1)

(b) **two** numbers with a sum of 15

..... and

(1)

(c) a factor of 12

.....

(1)

(d) a multiple of 4

.....

(1)

James says that 10 is a square number because $5^2 = 10$

(e) James is wrong.
Explain why.

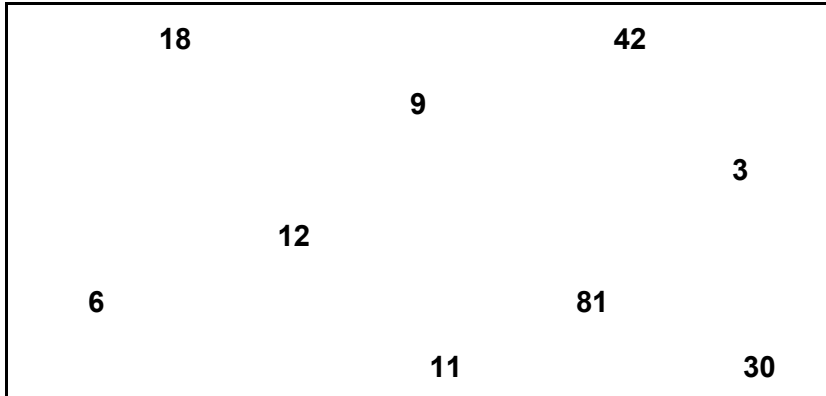
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.....

(1)

(Total 5 marks)

Q6.



From the numbers in the rectangle,

(i) write down a multiple of 4,

.....

(ii) write down a factor of 21,

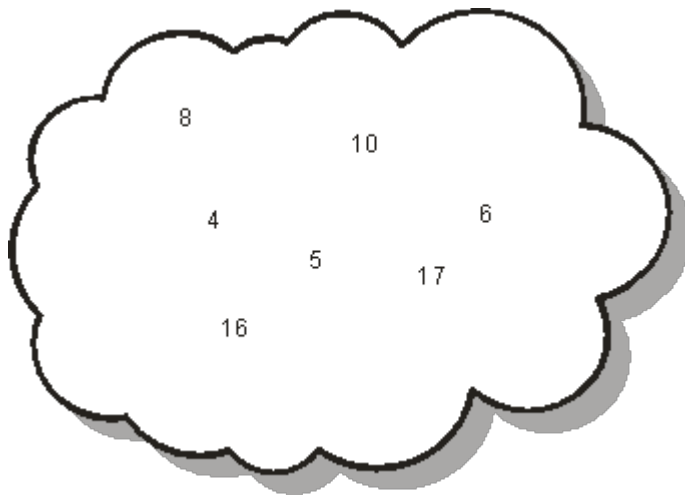
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(iii) write down a prime number.

.....

(Total 3 marks)

Q7.



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)	8	1	B1 for 8 cao
(b)	25	1	B1 for 25 cao
(c)	33	1	B1 for 33 (or 11)
Total for Question: 3 marks			

M2.

	Answer	Mark	Additional Guidance
(i)	4 to 5	1	B1 for 4 to 5
(ii)	30 to 40	1	B1 for 30 to 40
(iii)	29	1	B1 cao
Total for Question: 3 marks			

M3.

Working	Answer	Mark	Additional Guidance
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	12, 20 and 40	2	B2 cao (– 1 for each extra number given) B1 for 1 or 2 correct numbers (– 1 for each extra number given)
			Total for Question: 2 marks

M4.

	Answer	Mark	Additional Guidance
(i)	5 or 7	4	B1 5 or 7
(ii)	4		B1 cao
(iii)	6		B1 cao
(iv)	2 or 5		B1 2 or 5
			Total for Question: 4 marks

M5.

	Answer	Mark	Additional Guidance
(a)	Two of 3, 5, 9, 11	1	B1 cao
(b)	5, 10 or 6,9	1	B1 cao
(c)	3 or 6	1	B1 for 3 or 6
(d)	8 or 16	1	B1 for 8 or 16

(e)	e.g. " $5^2 = 25$ "	1	B1 for correct explanation, e.g. $5^2 = 25$ or $3^2 = 9$ and $4^2 = 16$ so 10 cannot be a square number or showing diagrammatically that 10 is not a square number
Total for Question: 5 marks			

M6.

	Answer	Mark	Additional Guidance
(i)	12	1	B1 for 12 cao
(ii)	3	1	B1 for 3 cao
(iii)	3 or 11	1	B1 for 3 and/or 11 cao
Total for Question: 3 marks			

M7.

	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 too was well understood with almost all candidates gaining full marks; however a small minority gave odd numbers instead of evens and 3 instead of a square number.

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It was inevitable that some candidates would confuse factors and multiples, but the majority were able to answer (i) & (ii) correctly. Part (iii) was less well answered with candidates unable to remember what a prime number was, with many of each of the numbers greater than 15 being selected.

- E4.** Most parts of this question were well attempted, but in part (ii) performance was poor, with many candidates unable to identify the “4” from the list as the square number.

- E5.** 95% of candidates could identify 2 odd numbers from the list given and the great majority could identify a pair of numbers whose sum was 15 though some gave the pair whose product was 15. Parts (c) and (d) of the question were also well answered though some candidates gave 4, a number which did not appear in the list given, as a factor of 12. Explanations given in part (e) were generally correct, clear and succinct. The main loss of marks in this part was due to attempts to explain that square numbers “go into themselves” or confusion between the terms square and prime.

- E6.** Part (i) was well answered. However, in parts (ii) and (iii) there was much miss-understanding of the terms “factor” and “prime”. In the former candidates chose numbers that were not factors, or 42, and in the latter chose numbers that were not prime numbers.