Odd and Even Numbers - Answers

Key Stage 2: 2004 Paper A

1.

5	Award **TWO** marks for all three calculations completed correctly as shown: 5 × **4** 12 ÷ **3** 9 + **5** If the answer is incorrect, award **ONE** mark for two calculations completed correctly, eg 5 × **4** 12 ÷ **5** 9 + **3**	***Up to 2m***	*Answers to the calculations are not required for the award of the mark.* *Accept for **ONE** mark* *4, 3, * **OR*** *4, *, 5 **OR*** *4, *, 3 **OR*** *, 3, 5* *where * is any number or blank.*

Key Stage 2: 2004 Paper A

2.

12	Award **TWO** marks for a correct number written in each of the four boxes. If the answer is incorrect, award **ONE** mark for three boxes completed correctly.	***Up to 2m***	*Accept more than one number in each box, provided all are correct.*

	even	not even
a square number	0 **OR** 4 **OR** 16 **OR** 36 **OR** 64	1 **OR** 9 **OR** 25 **OR** 49 **OR** 81
not a square number	even **AND** not square **AND** less than 100	odd **AND** not square **AND** less than 100

Key Stage 2: 2004 Paper A

3.

19	An explanation which recognises that the sum of adding three odd numbers is always odd, eg ■ 'Because odd + odd + odd = odd'; ■ 'Because three odd numbers can't add up to an even number'; ■ 'Because an odd number of odd numbers makes an odd number'.	**1m** U1	***Do not** accept numerical exemplification without further explanation, eg* ■ *'Because 21 + 23 + 7 = 51';* ■ *'Because 21 + 23 + 6 = 50'.* ***Do not** accept vague or arbitrary explanations, eg* ■ *'Because 50 is even';* ■ *'Because you can only do it with two odd numbers'.*

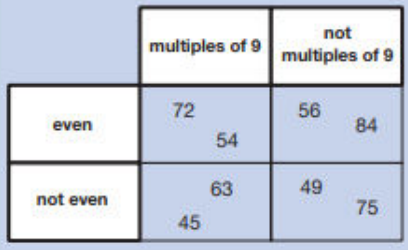
Key Stage 2: 2008 Paper B

1.

8	An explanation which recognises that half of an even number is sometimes an even number, eg: ■ 'Every alternate even number gives an even number when halved' ■ 'Two even numbers make an even number' ■ 'Half of a multiple of 4 will always be even' ■ 'Sometimes you get an even number' **OR** a counter-example demonstrating that half of an even number can be an even number, eg: ■ 'Half of 8 is 4' ■ '4 ÷ 2 = 2' ■ 'Double 10 is 20' ■ 'Half 12 is 6 but half 6 is 3'.	**1m** U1	*No mark is awarded for circling 'No' alone.* ***Do not** accept vague or incomplete explanations, eg:* ■ *'It doesn't always work'* ■ *'It's always even'* ■ *'Half of 6 is 3'* ■ *'Two odds make an even'.* *If 'Yes' is circled but a correct unambiguous explanation is given, then award the mark.*

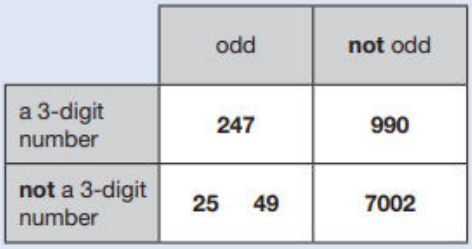
Key Stage 2: 2008 Paper B

2.

9	Diagram completed as shown:  	***1m***	*Accept recognisable misspellings.* *Accept 'odd' for 'not even'.* *Accept alternative unambiguous indications, eg lines drawn from the labels to the appropriate parts of the diagram.*

Key Stage 2: 2010 Paper A

1.

10	Award **TWO** marks for the table completed as shown:  If the answer is incorrect, award **ONE** mark for four numbers placed correctly.	**Up to 2m**	**Do not** accept numbers written in more than one section.

Key Stage 2: 2010 Paper A

2.

17	18 + 16 + 6 **OR** 18 + 14 + 8 **OR** 18 + 12 + 10 **OR** 16 + 14 + 10	**1m**	Numbers may be given in any order.

Key Stage 2: 2011 Paper B L6

1.

1	845	1m	

Key Stage 2: 2012 Paper B

1.

25	An explanation which gives a counter-example to illustrate that two odd numbers and an even number can total 50, eg: ■ '46 + 1 + 3 = 50' ■ '20 + 15 + 15 works' ■ '5 and 20 and 25' **OR** an explanation which recognises that two of the numbers could be odd, eg: ■ 'You could use two odd numbers to make 10, and then add 40' ■ 'Two of the numbers could be 1 and 3' ■ 'Odd + odd + even = even'.	1m U1	No mark is awarded for circling 'No' alone. **Do not** accept vague or incomplete explanations, eg: ■ 'You can't divide it by 3' ■ 'Odd + odd = even'. If 'Yes' is circled but a correct, unambiguous explanation is given, then award the mark.

Key Stage 2: 2013 Paper B L6

1.

1	Gives a correct probability, eg: • 45% • 0.45 • $\frac{45}{100}$ • $\frac{9}{20}$	2m	! ***Probability*** See guidance (page 8)
	or		
	Shows or implies a complete correct method, with not more than one computational error, eg: • $\frac{1}{4} = 100 \div 4 = 40\%$ *(error)* $40\% + 30\% = 70\%$ $100\% - 70\% = 30\%$ • $\frac{1}{4} = \frac{4}{20}$ *(error)* $30\% = \frac{6}{20}$ $\frac{4}{20} + \frac{6}{20} = \frac{10}{20}$ $1 - \frac{10}{20} = \frac{10}{20}$ • $1 - \frac{1}{4} - 30\%$ $1 - 0.25 - 0.30 = 0.55$ *(error)* • P(Salt & Vin) = 1 – P(Prawn) – P(Cheese) $100\% - 25\% - 30\%$	1m	! ***Probability expressed as a percentage without a percentage sign*** Condone for 1m, ie: • 45 ! ***Conversion between fractions, decimals and percentages*** Within a complete correct method, conversions must be correct and/or show the method of conversion ✗ ***Incomplete methods which do not convert the probabilities to a common format,*** eg: • $1 - \frac{1}{4} - 30\%$