The Mathematical Mansion Answer Sheet

Room	Answers
The Kitchen	Margarine = 113g (113.2g) Sugar = 142g (141.5g) Flour = 170g (169.8g)
The Drawing Room	c) 200cm²
The Library	a) 29 books – (8x 2.25) + (10 x 3.5) + (10 x 4) + (1x5) = 98cm or (7 x 2.25) + (10x3.5) + (12x4) = 98.75cm b) 7 books c) 2cm or 1.25cm (1 ¼cm)
The Dining Room	Roast lamb = 2.50pm Steamed veg = 6.02pm Roast potatoes = 5.15pm Yorkshire pudding = 5.30pm Mashed potatoes = 5.50pm Gravy = 6.13pm
The Parlour	The 50p coin is in the 4th position.
The Music Room	There are 24 possible combinations. ABCD, ABDC, ACBD, ACDB, ADBC, ADCB, BACD, BADC, BCAD, BCDA, BDAC, BDCA, CABD, CADB, CBAD, CBDA, CDAB, CDBA, DABC, DACB, DBAC, DBCA, DCAB & DCBA. Have all the combinations been worked out? Was the first set starting with A worked out and then this used to work out the final answer? Were the results recorded systematically to ensure all the answers were recorded?
The Games Room	9 people = 36 elbow knocks 12 people = 66 elbow knocks 15 people = 105 elbow knocks 210 elbow knocks = 21 people
Willow Room	There would be 27 combinations – there would be nine different combinations of leggings and trainers to go with each t-shirt. Was the first set starting with the red t-shirt worked out and then this used to work out the final answer? Were the results recorded systematically to ensure all the answers were recorded?
Oak Room	Edward – Sydney – 3am 1st May Robert – New York – 1pm 31st April Ellie – Cape Town – 7pm 31st April Tom – Oslo – 7pm 31st April Abbie – Tokyo – 2am 1st May John – Buenos Aires – 2pm 31st April
Rowan Room	Possible approaches could be: a) 1011 – 786 could be done as 1011 – 686 - 100 b) 237 + 3567 could be done as 236 + 3568 c) 47 x 20 could be done as (48 x 20) – 20 d) 442 ÷ 17 could be done as (442 ÷ 34) x 2 e) 27 x 7 could be done as 13.5 x 14 It is important for children to be able to explain why they know their alternate approaches will work.
The Attic	Book order = e, b, c, f, d, a