Problem Solving & Word Problems: Hard Practice Paper 3 Answers

Q#	Answer	Explanation
1	C	Working backwards, divide by 2 to get 19, take away the 9 to get 10, then double it to get 20.
2	D	The apples cost 3 × 35p = £1.05, so the two pears cost £1.85 − £1.05 = 80p, which makes one pear 40p.
3	C	The original total is 5 × 20 = 100, and the new total is 115, so the new mean is 115 ÷ 5 = 23.
4	C	The sale price is 85% of the original. Since 85% is £102, then 5% is £6 and 100% is 20 × £6 = £120.
5	C	If Mia is 16 now, in 4 years she will be 20, and 6 years ago she was 10. Since 20 is twice 10, the answer is 16.
6	C	The book and the money left account for £30, which must be the three fifths remaining after the game. One fifth is £10, so she started with £50.
7	D	The girls are 3/8 and the boys are 5/8, so the difference is 2/8, which is a quarter. Since a quarter is 40, the total is 4 × 40 = 160.
8	C	Between 40 and 60 the numbers leaving 2 when divided by 5 are 42, 47, 52 and 57. Of these, only 52 leaves 3 when divided by 7, since 52 = 7 × 7 + 3.
9	C	The whole job is 8 × 6 = 48 person-hours. In 2 hours they complete 16, leaving 32 person-hours for 4 people, which takes 32 ÷ 4 = 8 hours.
10	C	The area is 5 × 4 = 20 m², so the carpet costs 20 × £18 = £360, and adding the fitting gives £360 + £45 = £405.
11	C	If all 12 tickets were for children the cost would be £60. Each adult ticket adds £3, and the extra is £21, so there are 21 ÷ 3 = 7 adult tickets.
12	B	Counting back 2 hours from 21:00 gives 19:00, and counting back 35 more minutes gives 18:25.

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13	B	The four children total 4 × 9 = 36 years, so with the fifth child the total is 50 years and the mean is 50 ÷ 5 = 10.
14	D	The smallest number that is a multiple of both 6 and 8 is 24, so the multiples are 24, 48, 72, ... and the first one above 50 is 72.
15	A	Three packs give 18 pens for £18, and the 2 extra pens cost £2.40, making £20.40. Buying 20 single pens would cost £24, so the packs are cheaper.

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