

Problem Solving & Word Problems: Hard Practice Paper

5 Answers

Q#	Answer	Explanation
1	C	Working backwards, take away the 10 to get 6, multiply by 3 to get 18, then add the 7 to get 25.
2	C	The coffees cost $2 \times £2.10 = £4.20$, so the three cakes cost $£11.40 - £4.20 = £7.20$, which makes one cake $£2.40$.
3	C	The total is the mean multiplied by how many numbers there are: $8 \times 12.5 = 100$.
4	C	The sale price is 80% of the original. Since 80% is £68, then 20% is £17 and the full price is $5 \times £17 = £85$.
5	B	The daughter is 1 share and the mother is 5 shares, making 6 shares. One share is $54 \div 6 = 9$, so the daughter is 9.
6	D	Walking and cycling account for $\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$ of the pupils, so the 12 who come by bus are the remaining $\frac{1}{6}$. The total is $6 \times 12 = 72$.
7	B	There are 8 shares, so one share is £45 and the smaller club receives $3 \times £45 = £135$. After spending £45 it has $£135 - £45 = £90$ left.
8	E	Between 20 and 40 the numbers leaving 1 when divided by 4 are 21, 25, 29, 33 and 37. Of these, only 37 leaves 2 when divided by 5.
9	C	The job takes $3 \times 8 = 24$ painter-days, so to finish in 2 days you need $24 \div 2 = 12$ painters.
10	C	The lawn is $12 \times 7 = 84 \text{ m}^2$ and the pond is 6 m^2 , so 78 m^2 needs turf, costing $78 \times £6 = £468$.
11	D	The monthly payments are $12 \times £18 = £216$, and adding the joining fee gives $£216 + £25 = £241$.
12	B	Counting back 1 hour from 00:20 gives 23:20, and counting back 50 more minutes gives 22:30.
13	C	If all 6 tickets were for adults the cost would be £72. Each child ticket instead saves £5, and the saving is £20, so there are $20 \div 5 = 4$ children.

14	C	The middle number is $66 \div 3 = 22$, so the numbers are 20, 22 and 24, and the largest is 24.
15	C	Six 1 litre bottles cost $6 \times \text{£}1.40 = \text{£}8.40$, while two 3 litre bottles cost $2 \times \text{£}3.60 = \text{£}7.20$, so the saving is $\text{£}1.20$.

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