Problem Solving & Word Problems: Medium Practice Paper 8 Answers

Q#	Answer	Explanation
1	C	The coach shared between the pupils is 280 ÷ 40 = 7 pounds each. Adding the entry fee gives 7 + 6.50 = 13.5, so each pupil pays £13.50.
2	A	April is the tallest bar at 65 mm and May the shortest at 25 mm. The difference between them is 65 − 25 = 40 mm.
3	A	One egg costs 90 ÷ 6 = 15 pence. Fifteen eggs therefore cost 15 × 15 = 225 pence, which is £2.25.
4	C	The multiples of 9 above 50 are 54, 63, 72, 81 and 90. Their digits differ by 1, 3, 5, 7 and 9 in turn, so only 63 has digits differing by 3.
5	D	The cycling row must add up to its own total, so the missing number is 18 − 8 = 10. Checking down the girls column, 15 + 10 = 25, which matches.
6	C	Counting on from 18:50 to 21:00 is 2 hours 10 minutes, and 5 minutes more reaches the end. From 18:50 to 21:05 is 2 hours and 15 minutes.
7	B	She works 5 + 3 = 8 hours, earning 8 × 6.40 = 51.20 pounds. A quarter of that is 51.20 ÷ 4 = 12.8, so she saves £12.80.
8	D	The journey is two and a half lots of 100 km. Two lots use 12 litres and a half lot uses 3 more, so 12 + 3 = 15 litres altogether.
9	B	The small bag holds five lots of 100 g, so 2.20 ÷ 5 = 0.44 pounds each. The large bag holds eight lots, so 3.60 ÷ 8 = 0.45 pounds each. At 44p per 100 g the 500 g bag is the better value, by a penny.
10	E	The middle number is the mean of the three, so it is 51 ÷ 3 = 17. Odd numbers go up in twos, so the one before it is 17 − 2 = 15, and the three numbers are 15, 17 and 19.

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11	E	A quarter of the pupils come by car, and a quarter of 60 is 60 ÷ 4 = 15 pupils. The car slice is indeed half the size of the walking slice on the chart.
12	B	Ten per cent of 45 is 4.50, so 20% is twice that, which is 9 pounds. The price becomes 45 + 9 = 54 pounds.
13	A	The bottle holds 1,500 ml. Eight glasses take 8 × 180 = 1440 ml, leaving 1,500 − 1,440 = 60 ml, which is not enough for a ninth glass.
14	E	One person needs 450 ÷ 6 = 75 grams. Ten people therefore need 75 × 10 = 750 grams.
15	D	The water may drop by 300 − 60 = 240 litres before refilling. At 12 litres a day that takes 240 ÷ 12 = 20 days.

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