Data Handling & Probability: Medium Practice Paper 3 Answers

Q#	Answer	Explanation
1	D	Find the plastic bar and read across to the scale. The top of the bar is level with 40 kg.
2	C	Paper weighs 55 kg. Plastic is 40 kg and textiles is 15 kg, and 40 + 15 = 55 kg, so those two match the paper.
3	A	Read each bar and add them: 35 + 55 + 40 + 25 + 15 = 170 kg.
4	C	Birch has 2 whole circles and 1 half circle. The whole circles are 2 × 12 = 24 cars, and the half circle is 6 more, giving 24 + 6 = 30.
5	B	Cedar has 5 circles, which is 5 × 12 = 60 cars. Dale has 3 whole circles worth 36 cars and a half circle worth 6, which is 36 + 6 = 42 cars. The difference is 60 − 42 = 18.
6	D	The highest temperature is 8°C and the lowest is −7°C. Counting up from −7 to 0 is 7 degrees and from 0 to 8 is 8 degrees more, so the range is 7 + 8 = 15 degrees.
7	E	Add the amounts: £2.40 + £1.80 + £3.60 + £2.20 = £10.00. There are four children, so the mean is 10 ÷ 4 = 2.50, which is £2.50.
8	B	There are 15 pens and 5 of them are black, so the probability is 5 out of 15. Dividing both numbers by 5 gives 1/3.
9	A	The seed either grows or it does not, and those two chances add up to 1. So the answer is 1 − 0.85 = 0.15.
10	D	Everyone inside the brother circle has a brother, including the pupils in the overlap who have both. That is 12 + 9 = 21 pupils.
11	B	There are 12 + 9 + 7 + 8 = 36 pupils in total, and the 8 written outside the circles have neither. That is 8 out of 36, and dividing both numbers by 4 gives 2/9.

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12	C	Look for points above the 30 line. Weeks 4, 5 and 6 are above it, with 35, 32 and 40 children. Week 2 is exactly 30, which is not more than 30, so the answer is 3 weeks.
13	D	A quarter of the pupils chose a cat, which is 24 ÷ 4 = 6 pupils. Everyone else chose a different pet, so that is 24 − 6 = 18 pupils.
14	B	The table covers 10 + 6 + 4 + 8 + 5 + 7 = 40 pupils, and the cycle column holds 6 + 5 = 11 of them. The probability is 11 out of 40, which will not simplify.
15	E	Work out each chance: the dice gives 1/6, the bag gives 3/10, the word MATHS has one vowel among five letters so 1/5, Monday gives 1/7, and the coin gives 1/2. The largest of these is 1/2, so the coin is the most likely.

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