Data Handling & Probability: Hard Practice Paper 7

Q1. The two-way table shows how pupils travel to school, but one figure is missing. How many Year 6 pupils walk?

	Walk	Bus	Car	Total
Year 5	18	9	13	40
Year 6	?	12	11	45
Total	40	21	24	85

A. 18 *B.* 20 *C.* 22 *D.* 24 *E.* 26

Q2. Use the same travel table. One of the 85 pupils is chosen at random. What is the probability that the pupil is in Year 5 and comes by bus?

	Walk	Bus	Car	Total
Year 5	18	9	13	40
Year 6	22	12	11	45
Total	40	21	24	85

A. 9/85 *B.* 9/40 *C.* 9/21 *D.* 21/85 *E.* 40/85

Q3. A bag holds 5 red counters and 3 blue counters. Two counters are taken out one after the other and not put back. What is the probability that both are red?

A. 5/14 *B.* 5/16 *C.* 25/64 *D.* 1/2 *E.* 5/8

Q4. Two fair six-sided dice are rolled. What is the probability that the two dice show the same number?

A. 1/12 *B.* 1/6 *C.* 1/4 *D.* 1/3 *E.* 1/2

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Q5. A spinner has 4 equal sections and one of them is red. The spinner is spun twice. What is the probability of getting at least one red?

A. 1/16 *B.* 1/4 *C.* 3/8 *D.* 7/16 *E.* 1/2

Q6. A biased coin lands on heads with a probability of 0.45. If it is flipped 600 times, how many heads would you expect?

A. 220 *B.* 245 *C.* 260 *D.* 270 *E.* 300

Q7. In a group of 50 people, 32 play football and 25 play cricket. 8 people play neither sport. How many play both?

A. 7 *B.* 10 *C.* 11 *D.* 13 *E.* 15

Q8. Use the same group of 50 people. One of them is chosen at random. What is the probability that the person plays football but not cricket?

A. 10/50 *B.* 15/50 *C.* 17/50 *D.* 25/50 *E.* 32/50

Q9. A bag holds red counters and blue counters only. The probability of taking a red is 3/8, and there are 15 counters that are not red. How many counters are in the bag altogether?

A. 18 *B.* 20 *C.* 24 *D.* 27 *E.* 40

Q10. A fair six-sided dice was rolled 60 times and landed on a 6 exactly 15 times. How many more 6s were rolled than would have been expected?

A. 3 *B.* 5 *C.* 6 *D.* 10 *E.* 15

Q11. Two spinners, each numbered 1 to 4, are spun and the two numbers are added together. What is the probability that the total is 5?

A. 1/8 *B.* 3/16 *C.* 1/4 *D.* 5/16 *E.* 1/2

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Q12. A bag holds only red and blue counters. The probability of taking a red counter is twice the probability of taking a blue one. What is the probability of taking a red?

A. 1/3 *B.* 1/2 *C.* 3/5 *D.* 2/3 *E.* 3/4

Q13. Use the travel table again. A pupil who comes by car is chosen at random. What is the probability that the pupil is in Year 5?

	Walk	**Bus**	**Car**	**Total**
Year 5	18	9	13	40
Year 6	22	12	11	45
Total	40	21	24	85

A. 13/85 *B.* 13/40 *C.* 13/24 *D.* 11/24 *E.* 24/85

Q14. A fair coin is flipped and a fair six-sided dice is rolled. What is the probability of getting a head and a number greater than 4?

A. 1/12 *B.* 1/6 *C.* 1/4 *D.* 1/3 *E.* 5/12

Q15. In a sample of 40 pupils, 14 walk to school. There are 600 pupils in the school altogether. How many of them would you expect to walk?

A. 140 *B.* 180 *C.* 210 *D.* 240 *E.* 280

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