

- 1 I choose five whole numbers. Now for a clue: their mean is 2 and their mode is also 2. What do you think these numbers could be? Explain your answer.
- 2 In a box there are 100 chocolates. Some have hard centres and some soft centres. The probability of picking one with a hard centre is 0.8. How many soft centres are there?
- 3 The mean of three consecutive whole numbers is 120. What are the three numbers?
- 4 Ten numbered cards have a mean of 5. Find the value of the tenth card if I tell you the other cards show 3, 6, 1, 3, 2, 6, 9, 8, and 7.
- 5 An eight-sided spinner is numbered 1 to 8. The spinner is fair. Give, as a decimal, the probability that it will land on an even number?
- 6 Four numbered cards are picked, one at a time, from a pack numbered 1 to 20 and not replaced. Explain why the probability of picking an even card is not always $\frac{1}{2}$.
- 7 I know there are fewer than ten balls in a bag. I pick one ball. There is a 2 in 5 chance of it being blue and an 60% chance of being red. How many of each colour are there?
- 8 These are the rules for a game of chance with the numbers 1 to 9. Kelly wins if she picks a multiple of 3 and Jeff wins if he picks a prime number. Are the rules fair? Explain.
- 9 Pele and Harry sell raffle tickets. They only sell odd numbers but in order. If they begin at 1 and have just sold the ticket numbered 234, how many have they sold all together?
- 10 A set of seven numbers has a mean of 8 and a mode of 12. Five of the numbers are 3, 12, 8, 12 and 4. Find the two other numbers in the set.
- 11 Ten consecutive odd numbers have a mean of 10. What are the ten numbers?
- 12 Three children play a game with a 12-sided spinner numbered 1 to 12. Jak wins if it lands on an odd number, Sam wins if it is a prime number and Sue wins if it is a multiple of 3. Who has the best chance of winning and why?
- 13 The sum of four consecutive numbers is 34. What is their mean? I add another number to the four and the mean is now 8. What was the number I added?
- 14 I think of four different whole numbers all of which are less than 5. Their mean is 2.5 is a clue to the numbers. What do you think are the numbers?
- 15 Seventeen numbers have a mean of 13.6. What is the sum of the seventeen numbers?