|  |  |
| --- | --- |
| Q1 | Balti Towers is an Indian takeaway that also offer a delivery service. Last year, the business delivered 1,400 curries. This year, the owner estimates that they will deliver 1,512 curries.Calculate the estimated percentage increase curry deliveries. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q2 |  School of Choc is a confectionary manufacturer located in County Durham. The business employs 120 staff. The ratio of male to female staff is 2:3.Calculate how many female staff School of Choc employs. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q3 | Jimmy Chews is a sweet shop located in Wetherby. This year, the owner estimates that the business, which also sells soft drinks, will sell 3,360 cans of coca cola, 5% more than last year.Calculate how many cans of coca cola Jimmy Chews sold last year. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q4 | Bubblicious is a hot tub manufacturer located in Chester. Their hot tubs retail for £4,500. The manufacturing cost per hot tub is 2/5 of the selling price.Calculate the cost of manufacturing one hot tub. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q5 | The chart below shows the number of hot tubs Bubblicious sold between 2013 and 2016. The owner, estimates that in 2017, hot tub sales will be 5% lower than in 2016. Calculate the average annual sales of hot tubs between 2013 and 2017. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q6 |  Melchester Rovers Football Club can seat 42,000 spectators. Last week, when they played Harrogate Town, there were 36,960 spectators.Calculate the percentage of empty seats. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q7 | A family of four, on holiday in the UK from Spain, visited the ‘Whale of a Time’ sea life centre in London. The total entrance cost for the family was £90. Assuming an exchange rate of £1: €1.08, calculate the total entrance cost in Euros. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q8 |  Loft in Space, a manufacturer of loft insulation, took 80 of its employees on a two-day team building trip to an outdoor activity centre in the Lake District. The total cost of the trip was £9,600. The accommodation cost per was 3/5 of the total cost per employee.Calculate the accommodation cost per employee. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q9 | Tea-Total is a café in Cumbria. Below is a pie chart showing the percentage of drinks purchased for a group of 200 customers.(A) Calculate how many customers purchased a coffee(B) Calculate how many customers did not purchase a tea(C) Calculate the fraction of customers that purchased a Latte |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q10 | Graham Riley is an employee of Father Treads, a business that specialises in car tyres. Graham attends a meeting at Head Office, travelling 60 kilometres each way. Graham is entitled to claim travel expenses at 45p per mile.Based on the assumption that 10 kilometres is equivalent to 6 miles (approximately), calculate how much Graham is entitled to claim. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q11 | Car-tastrophe is a car showroom based in Stanhope. The business consists of one manager and 3 salesman, Jim, Jon and Joseph. Each month, a sum of money is paid as a bonus and is divided in the ratio of the number of cars each salesman has sold. Jim sold 7 cars, Jon sold 8 cars and Joseph sold 9 cars. Joseph received £1,125Calculate how much money Jim and Jon received. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q12 | Barber Streisand is a hair dressing salon located in Sunderland. The owner Barbara, recently introduced a new system of rewarding her staff. At the end of the week, Barbara puts the following in a bag:5 x £10 notes4 x £20 notes3 x £50 notesAt the end of the week, the hairdresser who has provided the best service can select a note from the bag as a reward.Calculate the probability of not selecting a £10 note. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q13 | Frame, Set and Match is a picture framing business with several shops across the North East of England. The business has a total of 90 employees, of which 54 are female.Calculate, in the lowest possible terms, what fraction of the total employees are male. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q14 | Wooden it be Lovely is a small manufacturer of wooden children’s toys. Last week, the business produced 32,000 toys, of which 40% were checked for quality. Of the 40% checked, 1/5 had a defect.Calculate how many wooden toys were found to not have a defect. |
| ***Your workings:*** |

|  |  |
| --- | --- |
| Q15 | Sparked Out is a retailer of electrical products located in County Durham. The owner, Joseph Sparks, is analysing the sales figures of two product lines, the Lavazza coffee machine and the Breville toaster. In 2016, the total value of Lavazza coffee machine sales was £12,100 whilst the total value of Breville toaster sales was £5,292. Joseph noticed that the sales of Lavazza coffee machines have been increasing by 10% per year, whilst the sales of Breville toasters have been increasing by 5% per year, over the last two years.Calculate the total sales value of Lavazza coffee machine sales and Breville toasters in 2014. |
| ***Your workings:*** |

|  |
| --- |
| Q16 (Written Question – this will assess your ability to construct logical arguments and reach a reasoned conclusion) |
| Jephson’s Bakery Ltd is a small private company that owns a bakery and 3 cafés in the Birmingham area. The company has £500,000 of shares which are all owned by the 4 directors. The business has the opportunity to buy the premises next door to the bakery, currently being used as a plastic manufacturing business. Jephson’s bakery would like to expand the bakery into next door so that they could double their production capacity and begin selling their goods to retailers.The directors seek your advice on how to source the finance required for the expansion. The premises will cost £300,000 to purchase and they have 2 options to finance this.1. They could take out a mortgage for 70% of the cost of the expansion at a rate of 5% interest per year over 20 years. The remaining 30% would be paid for through retained profit which is all that the business has available.
2. They could sell shares of the business to other parties to raise the finance required. However, 2 of the directors are concerned that selling shares to others will dilute their ownership of the business and could have an impact on future decisions.

**Make your recommendation below. (12 marks)** |
|  |