



# Mathematics

## lesson 5 – Student worksheet

## GCSE Foundation

### Learning aim:

To analyse data and make observations and recommendations.

### Scenario:

For the modern business, staff retention is crucial to ensure the continued success of a company. Fatima is the Human Resources Manager at a national bank. She is analysing some of the offices' staff satisfaction and wellbeing data, in preparation for a presentation she will be delivering to bank executives.

### Career spotlight:

Human Resources (HR) Managers develop, deliver and manage HR policies and procedures. They lead an organisation's HR team and support other managers to get the best out of their staff by assessing training and development needs. They need to work well with others, with sensitivity and understanding. Strong communication skills are essential.

### Activity 1:

Answer the questions below to help Fatima prepare for the presentation.

Question 1: In the London branch, the survey found that 80% of employees are happy with their job, while 20% are not. Of those who are happy, 70% also feel appreciated by their colleagues. What is the probability that an employee is both happy and feels appreciated by their colleagues?

Question 2: In the Manchester branch, 60% of employees are happy with their salary, and 40% are not. Among those happy with their salary, 75% are also happy with their workload. What is the probability that an employee is happy with both their salary and workload?

Question 3: In Glasgow, 70% of employees are happy, and 60% of employees who are happy also believe in the company's mission. What is the probability that an employee is happy and believes in the company's mission?

Question 4: In York, 45% of employees reported that they are happy, and 60% of those who are happy also have good relationships with their coworkers. What is the probability that an employee is happy and has good relationships with coworkers?

Question 5: The Newcastle branch looked at opportunities for career growth, 30% of employees are happy, and 50% of those who are happy also have opportunities for career growth. What is the probability that an employee is happy and has opportunities for career growth?

Question 6: In the Southampton branch, 25% of employees are not happy with their work-life balance, and 70% of those who are not happy with their work-life balance are also not happy overall. What is the probability that an employee is not happy overall and not happy with their work-life balance?

Question 7: Birmingham looked at how happy their staff are – 60% of employees are happy with their workload, and 80% of those who are happy with their workload are also happy overall. What is the probability that an employee is happy overall and happy with their workload?

Question 8:

Also, at Birmingham, 40% of employees are not happy, and 60% of those who are not happy, feel overwhelmed by their workload. What is the probability that an employee is not happy and feels overwhelmed by their workload?

Question 9: In the bank overall, 75% of employees are happy, and 90% of those who are happy would recommend their employer to others. What is the probability that an employee is happy and would recommend their employer to others?

Question 10: In the Cardiff branch, 50% of employees are happy with their job, and 80% of those who are happy receive regular recognition for their work. What is the probability that an employee is happy and receives regular recognition?

### Activity 2:

Help Fatima create a 2-minute presentation to the bank executives, drawing together the answers to the questions above. In the presentation, you will need to include:

- What the purpose of this research was.
- Key data from the probability tree that you think is most impactful.
- Key comparisons of the offices in the UK.
- Conclusions you can draw from the data.
- What you think the company should do next based on the data (for example, conduct another round of research to find out what makes people unhappy at work).

When you deliver the presentation, each member of the group should participate. This could mean each team member presenting back one of the above bullet points.

