

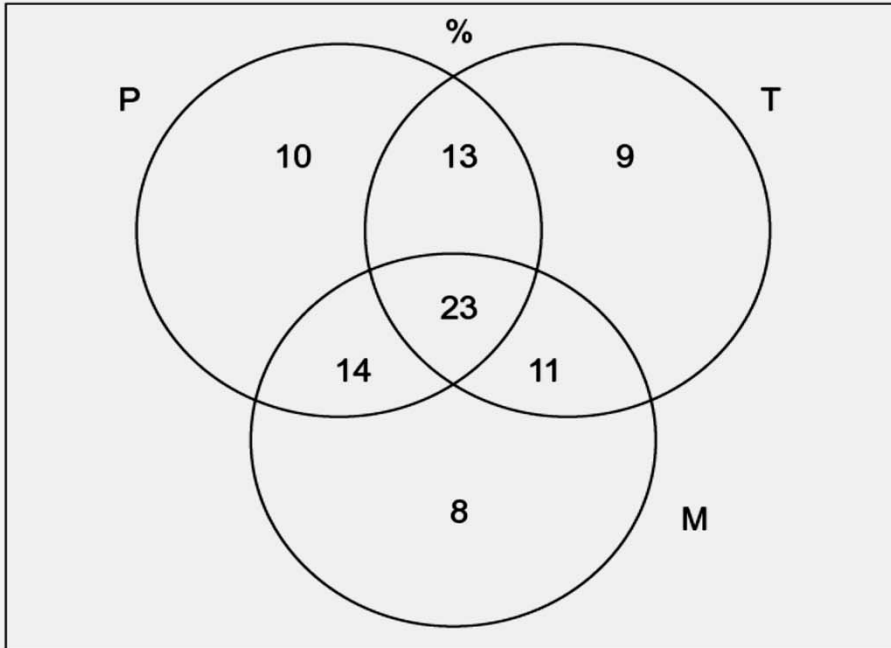
# GCSE Statistics - Diagnostic test

## Probability

NAME: \_\_\_\_\_

1

Eva works in Spain for a travel company. Her job is to help tourists on holiday. The Venn diagram shows the **percentages** of tourists she has helped over the years who have lost passports (P), tickets (T), money (M) or a combination of these. She also helped people for other reasons.



(a) Explain what the 23 in the diagram represents.

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*(1 mark)*

(b) Work out the percentage of people Eva helped who had **not** lost their passports, tickets or money.

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 .....

Answer ..... % *(2 marks)*

(c) One person helped by Eva is chosen at random.

(c) (i) What is the probability that this person lost their passport but **not** their tickets or money?

Answer ..... *(1 mark)*

(c) (ii) What is the probability that this person lost their tickets and money but had not lost their passport?

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Answer .....

(1 mark)

2

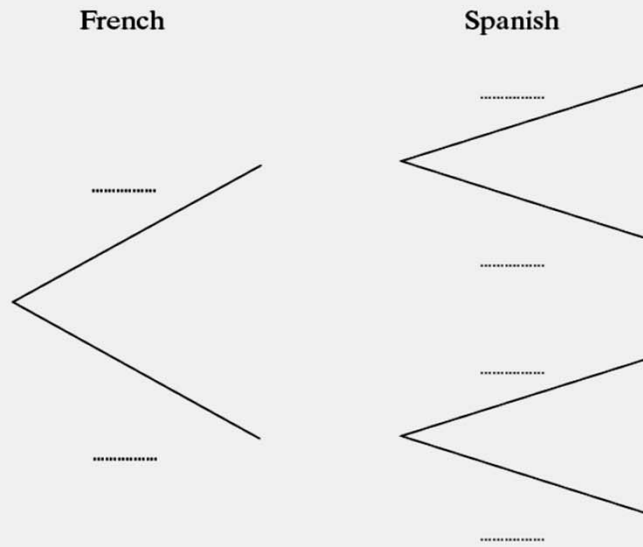
All students at a school study French and Spanish.

The probability that a student is good at French is 0.8

If a student is good at French, then the probability that he/she is good at Spanish is 0.9

If a student is **not** good at French, then the probability that he/she is good at Spanish is 0.3

(a) Complete the tree diagram to show the probabilities when a student is selected at random.



(4 marks)

(b) Calculate the probability that a student selected at random is good at French **and** Spanish.

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Answer ..... (2 marks)

(c) Calculate the probability that a student selected at random is good at Spanish.

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Answer ..... (3 marks)

Total \_\_\_\_\_ out of 14