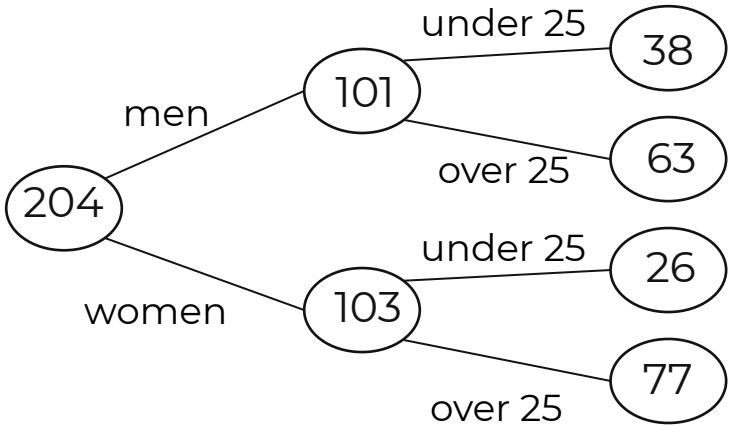
Find probabilities from frequency trees

Maths

Mrs Dennett

Find probabilities from frequency trees

1. The frequency tree shows some information about men and women.



A person is randomly selected.

Find the following

a) P(man)

b) P(man who is under 25)

c) P(person is over 25)

Find probabilities from frequency trees

2. There were 80 deliveries to a factory in a week.
Deliveries are on time or late.
They can be accepted or rejected.

- 36 were late.
- 9 deliveries were rejected.
- 39 deliveries were on time and accepted.

a) Draw a frequency tree to present the information.

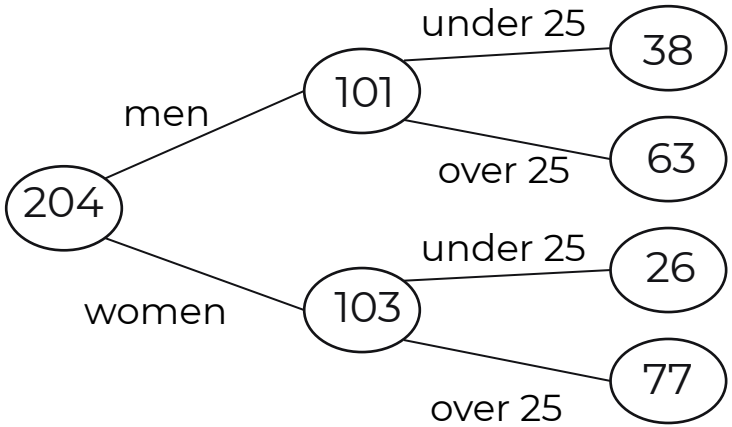
b) Calculate the following

(i) P(on time)
(ii) P(accepted)
(iii) P(accepted given that it was late)

Answers

Find probabilities from frequency trees

1. The frequency tree shows some information about men and women.



A person is randomly selected.

Find the following

a) P(man) $\frac{101}{204}$

b) P(man who is under 25) $\frac{38}{204}$

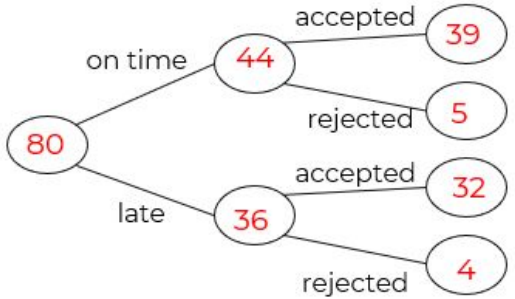
c) P(person is over 25) $\frac{140}{204}$

Find probabilities from frequency trees

2. There were 80 deliveries to a factory in a week.
Deliveries are on time or late.
They can be accepted or rejected.

- 36 were late.
- 9 deliveries were rejected.
- 39 deliveries were on time and accepted.

a) Draw a frequency tree to present the information.



b) Calculate the following

(i) P(on time) $\frac{44}{80}$

(ii) P(accepted) $\frac{71}{80}$

(iii) P(accepted given that it was late) $\frac{32}{36}$