

- 18 Imran asks 100 people if they speak French or German or Spanish. He draws a Venn diagram to give information about his results.

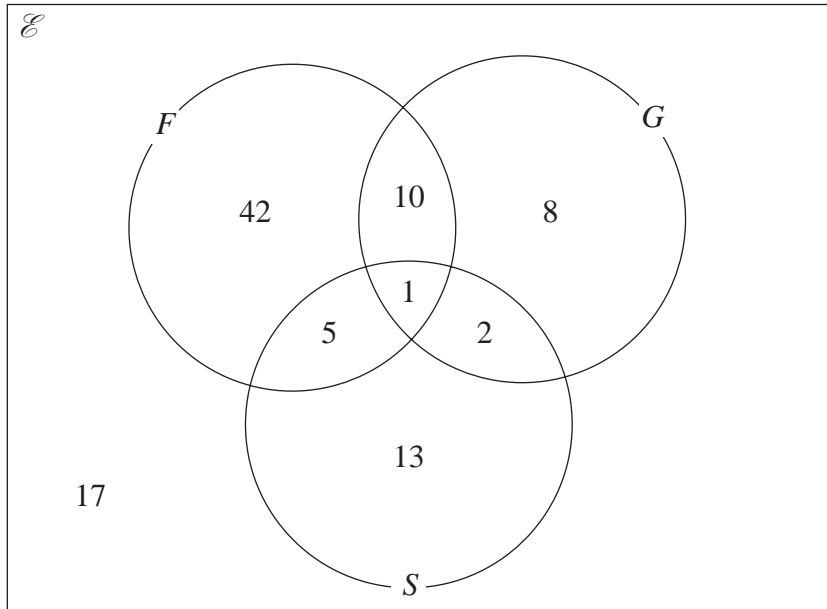
Here is Imran's diagram.

$\mathcal{E} = \{\text{all 100 people}\}$

$F = \{\text{people who speak French}\}$

$G = \{\text{people who speak German}\}$

$S = \{\text{people who speak Spanish}\}$



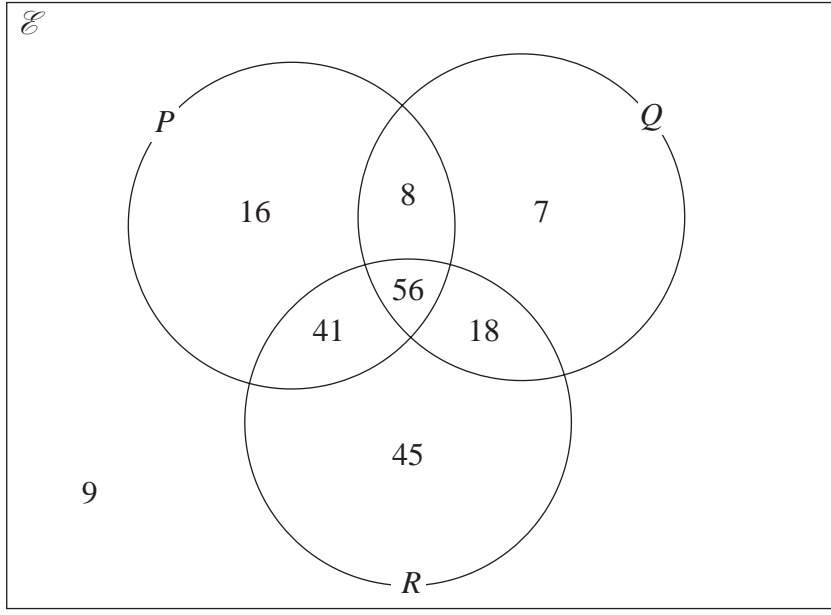
The diagram is not fully correct.

- (a) Explain why the diagram cannot be fully correct.

Jodie asks 200 people which of the social network sites, P, Q and R they use.

The Venn diagram gives information about her results.

- $\mathcal{E} = \{\text{all 200 people}\}$
- $P = \{\text{people who use site P}\}$
- $Q = \{\text{people who use site Q}\}$
- $R = \{\text{people who use site R}\}$



Given that a person selected at random from the 200 people uses site Q,

(b) find the probability that this person also uses site P.