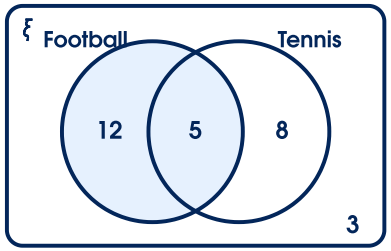
GCSE FOUNDATION · REVISION MAT 1

Venn diagrams and frequency trees

1 The Venn diagram shows the sports some students play.



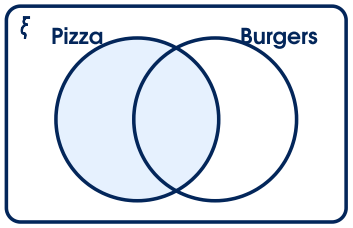
(a) How many play football?

(b) How many play football but not tennis?

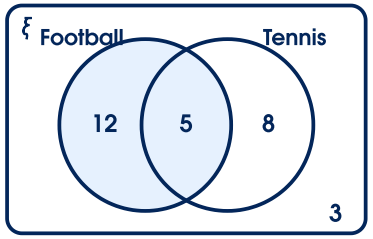
(c) How many play neither?

2 40 people were asked. 9 like both pizza and burgers.
14 like only pizza. 21 like burgers altogether.

Complete the Venn diagram.

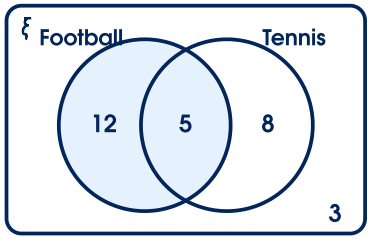


3 The Venn diagram shows the sports some students play.



Explain what the number 5 represents.

4 The Venn diagram shows the sports some students play.



A student is chosen at random.

Show that P(football or tennis or both) = $\frac{25}{28}$

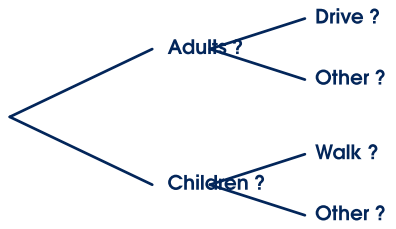
5 ξ = {whole numbers from 1 to 15}
A = {multiples of 3}, B = {odd numbers}

(a) Complete a Venn diagram.

(b) A number is chosen at random. Find P(A ∩ B).

6 120 people were surveyed. $\frac{3}{8}$ were adults. $\frac{2}{5}$ of the adults drive to work. $\frac{1}{3}$ of the children walk to school.

Complete the frequency tree.



One person is chosen at random. Find the probability that they are a child who walks.

ANSWERS · REVISION MAT 1

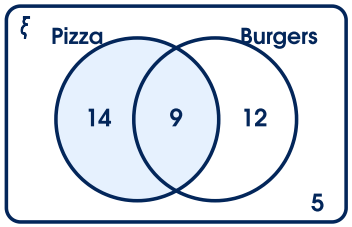
Venn diagrams and frequency trees

1 (a) 12 + 5 = **17**

(b) **12**

(c) **3**

2



Burgers only: 21 − 9 = 12

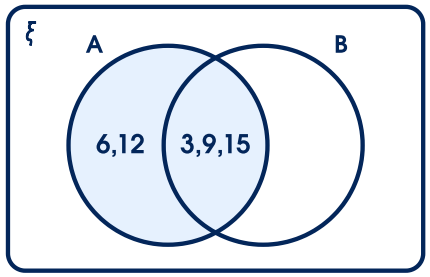
Neither: 5

3 5 students play **both** football and tennis.

4 12 + 5 + 8 = 25 out of 28

$\frac{25}{28}$ ✓

5



A only: 6, 12

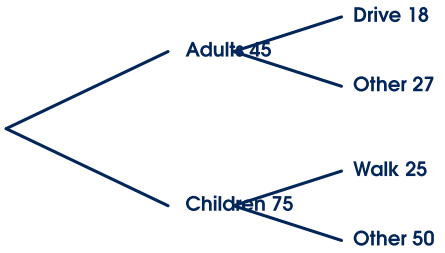
A ∩ B: 3, 9, 15

B only: 1, 5, 7, 11, 13

Neither: 2, 4, 8, 10, 14

(b) $\frac{1}{5}$

6



$\frac{5}{24}$

Mr&Mrs MATHS