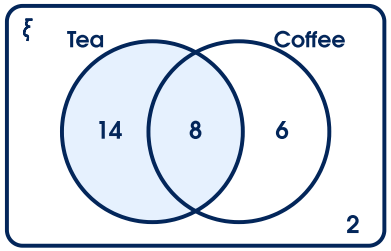
GCSE FOUNDATION · REVISION MAT 4

Venn diagrams and frequency trees

1 The Venn diagram shows the sports some students play.



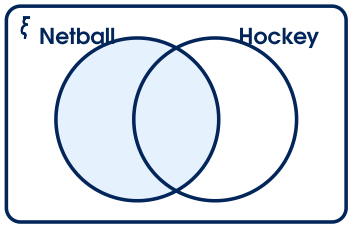
(a) How many play tea?

(b) How many play tea but not coffee?

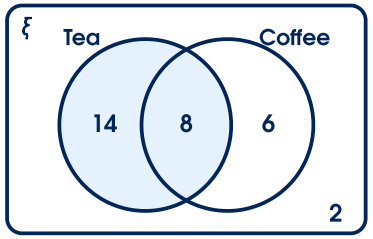
(c) How many play neither?

2 30 people were asked. 5 like both netball and hockey.
11 like only netball. 9 like hockey altogether.

Complete the Venn diagram.

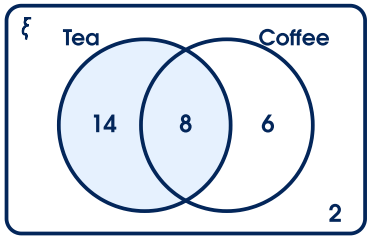


3 The Venn diagram shows the sports some students play.



Explain what the number 8 represents.

4 The Venn diagram shows the sports some students play.



A student is chosen at random.

Show that P(tea or coffee or both) = $\frac{14}{15}$

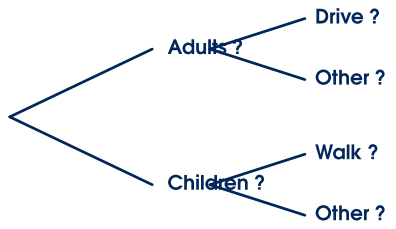
5 ξ = {whole numbers from 1 to 16}
A = {multiples of 3}, B = {even numbers}

(a) Complete a Venn diagram.

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

6 60 people were surveyed. $\frac{1}{3}$ were adults. $\frac{1}{2}$ of the adults drive to work. $\frac{1}{4}$ 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 4

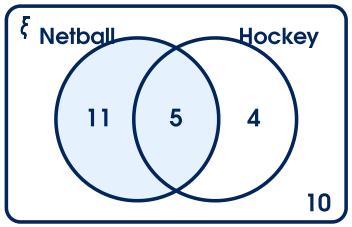
Venn diagrams and frequency trees

1 (a) 14 + 8 = **22**

(b) **14**

(c) **2**

2



Hockey only: 9 – 5 = 4

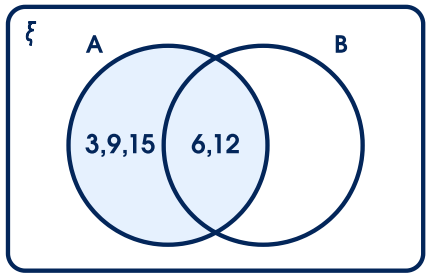
Neither: 10

3 8 students play **both** tea and coffee.

4 14 + 8 + 6 = 28 out of 30

$\frac{14}{15}$ ✓

5



A only: 3, 9, 15

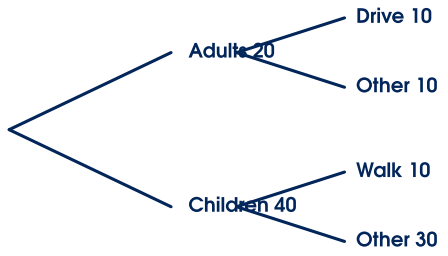
A ∩ B: 6, 12

B only: 2, 4, 8, 10, 14, 16

Neither: 1, 5, 7, 11, 13

(b) $\frac{1}{8}$

6



$\frac{1}{6}$