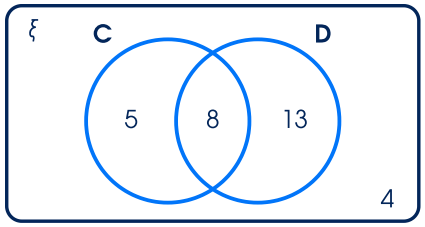
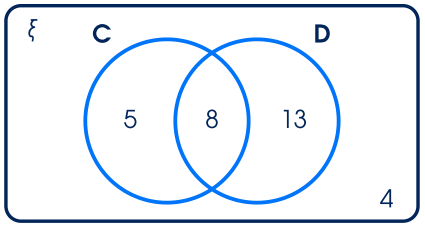
GCSE HIGHER · REVISION MAT 5

Venn diagrams and two-way tables

1 How many are in D?



2 Find P(C only).



3 Explain what it means if a region of a Venn diagram is empty.

4 100 people: 62 own a car, 41 own a bike and 9 own neither.

How many own both?

5 Show that 30 people chose the veggie meal.

	Veggie	Meat	Total
Adult	18		50
Child		18	30
Total		50	80

6 One person is chosen at random.

Find P(child who chose meat).

	Veggie	Meat	Total
Adult	18		50
Child		18	30
Total		50	80

7 $\xi = \{1, 2, \ldots, 12\}$, F = factors of 12, M = multiples of 4.

Show that $F \cap M = \{4, 12\}$.

8 In a Venn diagram, P(A only) = 0.3, $P(A \cap B) = x$, P(B only) = $2x$ and P(neither) = 0.1.

Find x and P(B).

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Venn diagrams and two-way tables

1 **21**

2 Total 30

$\frac{5}{30} = \frac{1}{6}$

3 **No items have that combination of properties.**

4 $100 - 9 = 91$

$62 + 41 - 91 = 12$

5 Child veggie: 12

$18 + 12 = 30$

6 $\frac{18}{80} = \frac{9}{40}$

7 $F = \{1, 2, 3, 4, 6, 12\}$, $M = \{4, 8, 12\}$

$F \cap M = \{4, 12\}$

8 $0.3 + 3x + 0.1 = 1$

$x = 0.2$, $P(B) = 0.6$