M1.(a)   9

                    9   10

            9   10   11

    9   10   11   12

                                                                                    B1

(b)   7

                ft a completed table

                                                                                    B1ft

(c)   Denominator of 36

or

Numerator of 5 (or their 5)
                36 choices identified

                                                                                    M1

$\dfrac{5}{36}$ or 0.138(...) or 0.139

or 13.8(...)% or 13.9%
                *correct or ft their 8s from a **complete** table*

                                                                                    A1ft
                                                                                    [4]

M2.A C

    A D

    B C

    B D

    C D

                Condone AB repeated

B1 for 3 or 4 correct

B2

Additional Guidance

AC can be written as CA, etc.

Once a student starts to repeat any combination the maximum mark is B1 for 3 or 4 correct

[2]

M3.
　(a)　LPM

　　　　PLM

　　　　PML　　　Any order

　　　　MLP

　　　　MPL

　　　　　　B1 for at least two more correct orders

B2

　(b)　$\frac{2}{6}$

　　　　　oe $\frac{1}{3}$

　　　　ft their (a) if at least one extra order given

B1ft

[3]

M4.(a)　(CB) CL CW

　　　　　　B2 for 5, 6 or 7 new combinations.

　　　HB HL HW

　　　　　　B1 for 2, 3 or 4 new combinations.

　　　PB PL PW

　　　　　　Accept any unambiguous representations of each sandwich

or drink.
For B1 and B2 ignore any repeats.

B3

(b) $\dfrac{1}{9}$ *oe*

ft their combinatiions if at least 1 HW

B1ft

[4]

M5. (a) Symbol represents 10 members

B1

Correct number of symbols for one row

Basketball (1)

Netball $\left(1\dfrac{1}{2}\right)$

Follow through from their key (not symbol =1)

M1

Two correct rows
ft wrong key (not symbol = l)

A1 ft

(b) Suitable headline reflecting data
Condone any valid statement about results eg
Most people do football
More do football than all the others in total
70 people go to sports clubs

B1

(c) $40 \div 5 \ (= 8)$ or $40 \div 2 \ (= 20)$ or $2 \times 5 \ (= 10)$
oe

M1

4

A1

[6]

M6.   (Outline of suitable table/sample space diagram and) begins to list outcomes
                    At least 5

                                                                                              M1

(shows all) 25 outcomes or indicates there are 25 outcomes
(eg sample space diagram)
                    Ignore any repeats or extras
                    Sight of 25 outcomes implies M2

                                                                                              M1

Identifies (the correct) 10 outcomes
                    *No more than one repeat or error or omission unless
                    recovered.*

                                                                                              M1

$\dfrac{10}{25}$

                    oe eg 0.4

                                                                                              A1

Logical and organised approach

                                                                                              Q1

                    Strand (ii)
                    *Award if M3 given **and** a clear and organised approach is
                    used*
                    Do not award if answer only given

Alternative method

$\dfrac{1}{5} \times \dfrac{1}{5}\left(=\dfrac{1}{25}\right)$

                    oe (for any outcome)

                                                                                              M1

$\dfrac{1}{5} \times \dfrac{1}{5}\left(=\dfrac{2}{25}\right)$ or $\dfrac{1}{5} \times \dfrac{3}{5}\left(=\dfrac{3}{25}\right)$ or $\dfrac{1}{5} \times \dfrac{4}{5}\left(=\dfrac{4}{25}\right)$

                    oe

M1

Their $\dfrac{1}{25}$ + their $\dfrac{2}{25}$ + their $\dfrac{3}{25}$ + their $\dfrac{4}{25}$

> *oe allow one error*

M1

$\dfrac{10}{25}$

> *oe eg 0.4*

A1

Logical and organised approach

> *Strand (ii)*
>
> *Award if M3 given **and** a clear and organised approach is used*
>
> *Do not award if answer only given*

Q1

[5]

M7. Lists at least 4 different combinations

or $\dfrac{1}{2}$ or $\dfrac{1}{4}$ seen

> *1A, 1B, 1C, 1D, 2A, 2B, 2C, 2D*

M1

Lists all 8 combinations

or 2 × 4 or 8 seen

or $\dfrac{1}{2} \times \dfrac{1}{4}$

> *Seen or implied eg 8 lines drawn from numbers to letters on diagram*
>
> *eg 1➜A, 1➜B etc*

M1dep

$\dfrac{1}{8}$

           oe

           A1

           [3]

M8. Lists at least 3 correct combinations

$\dfrac{1}{3}$ or $\dfrac{1}{2}$ seen

        (1)A3, (1)A4, (1)B3, (1)B4, (1)C3, (1)C4

        M1

Lists or chooses all 6 correct combinations
or
3 × 2 or 6 seen
or $\dfrac{1}{3} \times \dfrac{1}{2}$

        Seen or implied
        eg 6 lines drawn from letters to numbers on diagram A➜3, A
        ➜4, B➜3 etc

        M1

$\dfrac{1}{6}$

        A1

        [3]

M9. (a)   Lists at least 4 correct combinations from

    (SC), SB, SP

    CJ, CF, BJ, BF, PJ, PF

        1 × 3 + 3 × 2 or 3 + 6 oe

        M1

    9 or 8 (more)

        A1

(b) $\dfrac{3}{9}$ oe

> *ft their 3 and their 9 if probability > 0 and < 1*

B1 ft

(c)   270 × their $\dfrac{3}{9}$ oe

M1

90

> *ft their part (b) but must be > 0 and < 1*
> *Must give integer answer*

A1 ft

[5]

M10.   (a)   (ML, MK, DS, DL, DK, WS, WL, WK
B2 at least five more of the eight possible options seen
B1 2 - 4 more of the eight possible options seen

B3

(b)   their $\dfrac{1}{9}$

oe

B1 ft

[4]

M11.   Each has either lp, 2p, 5p, 10p or 20p

B1

Two-way table or listing method with at least 5 outcomes

M1

Correct options all shown or highlighted
eg ticks in a two-way table

M1 dep

$\frac{8}{25}$

oe   eg   0.32

SC2 $\frac{9}{25}$ *oe*

SC1 $\frac{n}{25}$ *0 < n < 25 (integer)*

A1

Alternative method

Each has either lp, 2p, 5p, 10p or 20p or $\frac{1}{5}$ or $\frac{4}{5}$ seen

B1

$\frac{1}{5} \times \frac{4}{5} \left(= \frac{4}{25} \right)$

oe

M1

their $\frac{4}{25} \times 2$

oe

M1 dep

$\frac{8}{25}$

oe   eg   0.32

SC2 $\frac{9}{25}$ *oe*

SC1 $\frac{n}{25}$ *0 < n < 25 (integer)*

A1

[4]

M12.   One correct pair

oe

B1

HH HT TH TT

Strand (ii)

oe

SC1   all four possible single toss outcomes(10p H, 10p T, 2p H, 2p T)

Q1

[2]

)