Probability
Difficulty: Easy

Question Paper 1

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Probability
Sub-Topic	Probability
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 1

Time allowed: **46 minutes**

Score: **/36**

Percentage: **/100**

Grade Boundaries:

CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

CIE IGCSE Maths (0980)

9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

The diagram shows a fair spinner.
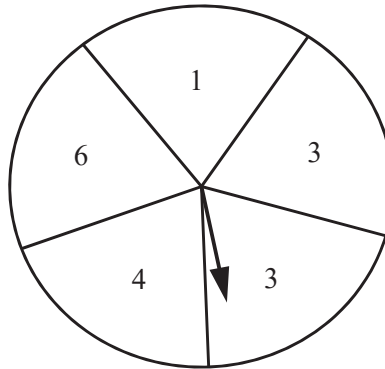
Anna spins it twice and adds the scores.

(a) Complete the table for the total scores.

		Score on first spin				
		1	3	3	4	6
	1	2	4	4	5	7
	3	4	6	6	7	9
Score on second spin	3	4	6	6	7	9
	4					
	6					

[1]

(b) Write down the most likely total score. [1]

(c)   Find the probability that Anna scores [2]

(i)   a total less than 6,

(ii)   a total of 3. [1]

2

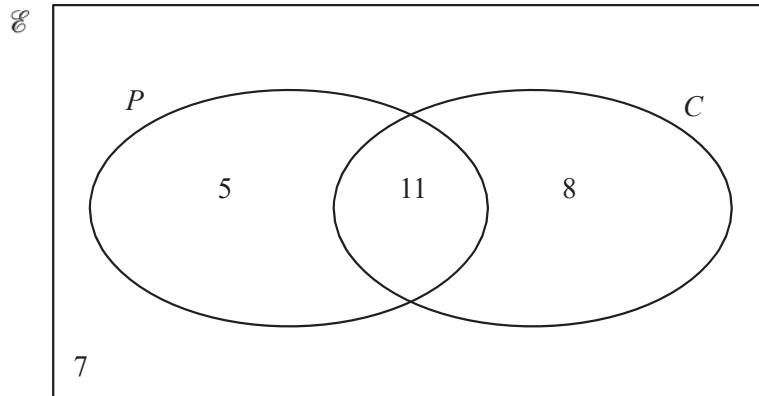The probability that Stephanie wins her next tennis match is 0.85 .

Find the probability that Stephanie does not win her next tennis match. [1]

(a) $\mathscr{E}$ = {students in a class}
P = {students who study physics}
C = {students who study chemistry}

The Venn diagram shows numbers of students.

(i)   Find the number of students who study physics or chemistry.   [1]

(ii)   Find n $(P \cap C')$.   [1]

(iii)   A student who does not study chemistry is chosen at random.

Find the probability that this student does not study physics.   [1]

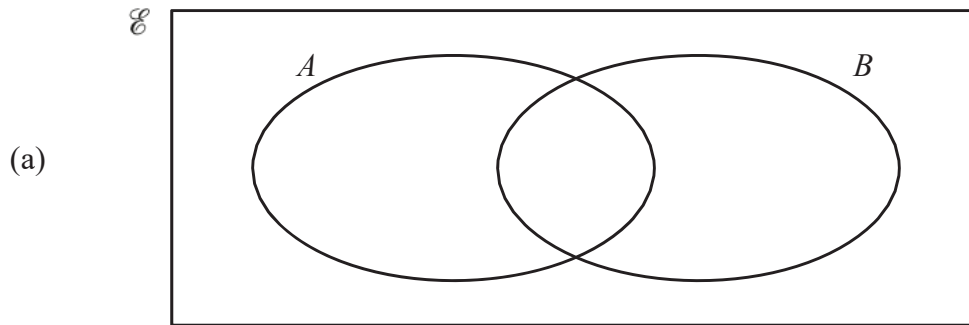**(b)** On the Venn diagram below, shade the region $D \cup E'$.   [1]
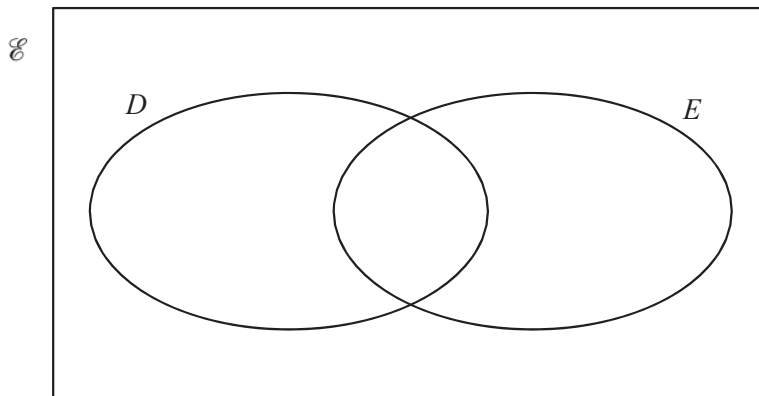
4

The probability that Pedro scores a goal in any match is $\dfrac{2}{5}$.

Calculate the probability that Pedro scores a goal in each of the next two matches.

[2]

$n(\mathscr{E}) = 10, \ n(A) = 7, \ n(B) = 6, \ n(A \cup B)' = 1.$
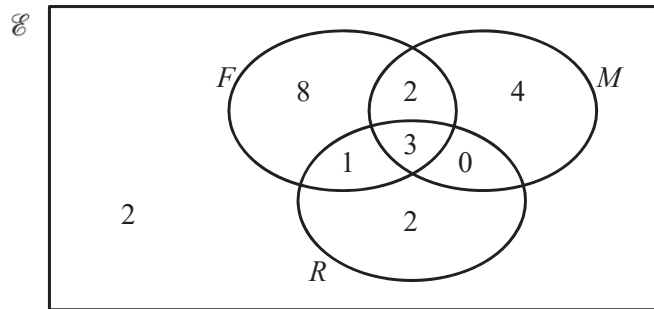
(a)

   (i)   Complete the Venn diagram by writing the number of elements in each subset.   [2]

   (ii)   An elemen $\mathscr{E}$ is chosen at random.

        Find the probability that this element is an elemen $A' \cap B$.   [1]

(b)   On the Venn diagram below, shade the region $C' \cap D'$.   [1]

The Venn diagram shows the number of people who like films (F), music (M) and reading (R).

(a)   Find

    (i)   n(M),   [1]

    (ii)   n($R \cup M$).

(b)   A person $\cup$ chosen at random from the people who like films.   [1]

    Write down the probability that this person also likes music.

                                                                             [1]

(c)   On the Venn diagram, shade $M' \cap (F \cup R)$.   [1]

The table shows the probability that a person has blue, brown or green eyes.

Eye colour	Blue	Brown	Green
Probability	0.4	0.5	0.1

Use the table to work out the probability that two people, chosen at random,

(a) have blue eyes,

[2]

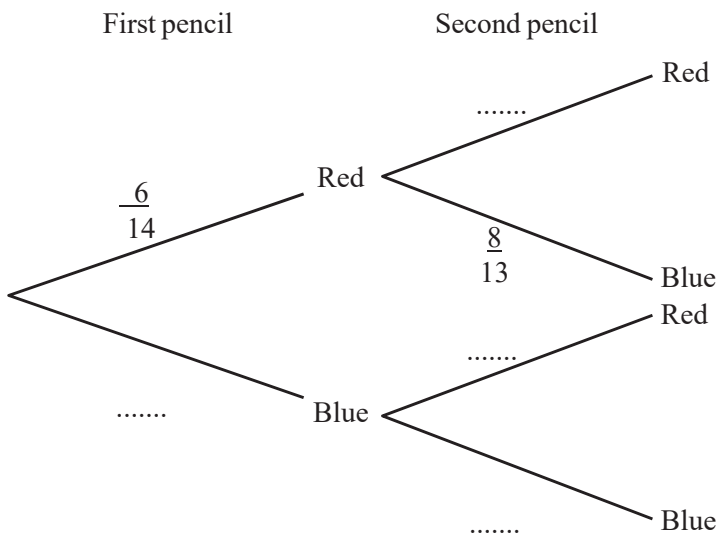**(b)** have different coloured eyes.

[4]

A box contains 6 red pencils and 8 blue pencils.
A pencil is chosen at random and not replaced.
A second pencil is then chosen at random.

(a) Complete the tree diagram.

First pencil   Second pencil

                                              Red
                                    ....
                          Red
              $\frac{6}{14}$ $\frac{8}{13}$
                                              Blue
                                              Red
                                    ....
              ....   Blue
                                    ....
                                              Blue

[2]

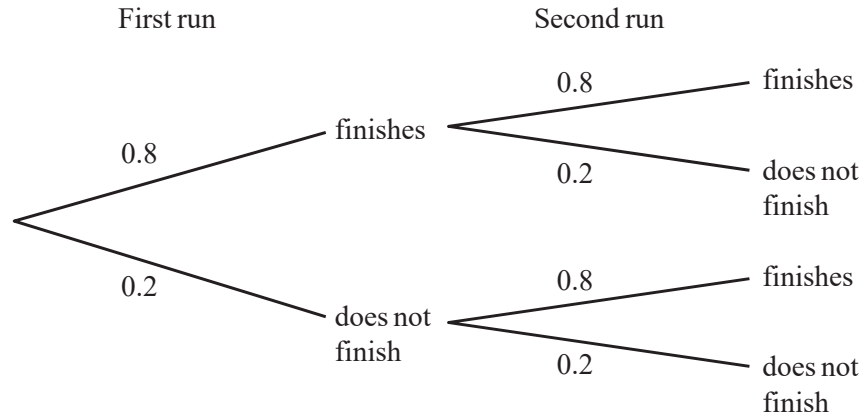(b) Calculate the probability that

    (i)   both pencils are red,

[2]

    (ii)   at least one of the pencils is red.

[3]

Samira takes part in two charity runs.
The probability that she finishes each run is 0.8 .

First run   Second run

                                              0.8   finishes
                              finishes
            0.8   0.2   does not
                                                               finish

            0.2   0.8   finishes
                              does not
                              finish   0.2   does not
                                                               finish

Find the probability that Samira finishes at least one run.

[3]