Name	Class

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Two-way tables
(9 – 1) Topic booklet

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

Instructions
•Use **black** ink or ball-point pen.
•**Fill in the boxes** at the top of this page with your name, centre number and candidate number.
•Answer **all** questions.
•Answer the questions in the spaces provided
 – *there may be more space than you need*.
•Diagrams are NOT accurately drawn, unless otherwise indicated.
•You must **show all your working out.**
•If the question is a **1F** question you are not allowed to use a calculator.
•If the question is a **2F** or a **3F** question, you may use a calculator to help you answer.

Information
•The marks for **each** question are shown in brackets
 – *use this as a guide as to how much time to spend on each question*.

Advice
•Read each question carefully before you start to answer it.
•Keep an eye on the time.
•Try to answer every question.
•Check your answers if you have time at the end.

Answer ALL questions
Write your answers in the space provided.
You must write down all the stages in your working.

9 Vadim has 56 clocks.
The clocks are only red, only blue or only black.

32 of the clocks are plastic.
5 of the 14 blue clocks are plastic.
8 of the 12 red clocks are **not** plastic.

Use this information to complete the two-way table.

	Red	Blue	Black	Total
Plastic				
Not plastic				
Total				

(Total for Question 9 is 3 marks)

11 Complete the two-way table.

	blue eyes	brown eyes	green eyes	total
boys	5		4	12
girls		7		
total			9	30

(Total for Question 11 is 3 marks)

12 Emma has 45 rabbits.

30 of the rabbits are male.
8 of the female rabbits have short hair.
12 of the rabbits with long hair are male.

(a) Use the information to complete the two-way table.

	Male	Female	Total
Long hair			
Short hair			
Total			

(3)

One of Emma's rabbits is chosen at random.

(b) Write down the probability that this rabbit is a female with short hair.

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(1)

(Total for Question 12 is 4 marks)

13 Sophie works in a bed shop.
During the last three months she sold 198 beds.

59 beds were sold without a mattress.
45 beds were double beds.
17 of the single beds were sold without a mattress.
67 of the 83 king size beds were sold with a mattress.

Use this information to complete the two-way table.

	Single	Double	King size	Total
With mattress				
Without mattress				
Total				

June 2022 – Paper 2F   **(Total for Question 13 is 3 marks)**

14 Ishmael asked 30 students at college to tell him the sport they each like the best from cricket or tennis or swimming.

11 of the 20 female students said swimming.
 2 of the male students said tennis.
 5 students said cricket.

The number of male students who said cricket was the same as the number of male students who said swimming.

Complete the two-way table.

	Cricket	Tennis	Swimming	Total
Male students				
Female students				20
Total				30

May 2020 – Paper 1F **(Total for Question 14 is 3 marks)**

21 There are 40 students in a class.
Each student walks to school or cycles to school or gets the bus to school.

There are 22 girls in the class.
9 of the girls walk to school.
7 of the boys cycle to school.
6 of the 10 students who get the bus to school are boys.

Find the number of these students who walk to school.

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(Total for Question 21 is 4 marks)

23 200 students chose one language to study.
Each student chose one language from French or Spanish or German.

Of the 200 students,

     90 are boys and the rest of the students are girls
     70 chose Spanish
     60 of the 104 students who chose French are boys
     18 girls chose German.

Work out how many boys chose Spanish.