

# ▶▶ 19 STARTER

Enrico's sheet

0 to 50	
51 to 100	
101 to 150	

Myra's sheet

0	40	80	120
1	41	81	121
2	42	82	122
3	43	83	123
4	44	84	124
5	45	85	125
6	46	86	126
7	47	87	127
8	48	88	128
9	49	89	129
10	50	90	130
11	51	91	131
12	52	92	132
13	53	93	133
14	54	94	134
15	55	95	135
16	56	96	136
17	57	97	137
18	58	98	138
19	59	99	139
20	60	100	140
21	61	101	141
22	62	102	142
23	63	103	143
24	64	104	144
25	65	105	145
26	66	106	146
27	67	107	147
28	68	108	148
29	69	109	149
30	70	110	150
31	71	111	151
32	72	112	152
33	73	113	153
34	74	114	154
35	75	115	155
36	76	116	156
37	77	117	157
38	78	118	158
39	79	119	159

Sunita's sheet

71 to 80

81 to 90

91 to 100

101 to 110

111 to 120

121 to 130

131 to 140

141 to 150





## ▶▶ EXERCISE 19.3

1

Subject	Tally	Frequency
Maths		11
Art		13
P.E.		
Drama		
Science		
English		

2

Red	Red	Blue	Blue	Red
Blue	Red	White	Blue	Black
Blue	Silver	Silver	Red	Silver
Black	Blue	Red	Silver	Blue
Red	White	Black	Silver	Silver
Blue	Red	Blue	Red	Blue

Colour of car	Tally	Frequency
Black		
Blue		
Red		
Silver		
White		

(continued)



# **EXERCISE 19.3 (continued)**

3

2	5	30	22	47	55	73	17	26	13
3	8	12	41	56	68	71	84	3	7
9	15	13	15	27	34	47	51	49	14

Age	Tally	Frequency
Under 5		
5–10		
11–20		
21–30		
31–40		
41–50		
51–65		
Over 65		

4

142	196	156	134	187	215	212	103	146	189
132	147	158	173	120	103	204	117	180	198
187	165	143	190	140	136	180	200	126	167

Height, $h$ (in cm)	Tally	Frequency
$100 \leq h < 120$		
$120 \leq h < 140$		
$140 \leq h < 160$		
$160 \leq h < 180$		
$180 \leq h < 200$		
$200 \leq h < 220$		

5

1	7	1	3	4	6	2	5	4	7
3	1	2	2	5	4	3	2	6	2
4	3	1	3	2	5	2	1	3	4

Number of phone calls	Tally	Frequency
1		
2		
3		
4		
5		
6		
7		

## ▶▶ EXERCISE 19.4

1

	Local shop	Supermarket	Total
Men aged 30 or below	16		25
Men aged over 30		6	25
Women aged 30 or below	7	18	
Women aged over 30		15	25
Total	52		100

2

	0 hours	1 hour	2 hours	3 hours	4 or more hours	Total
Boys	5	2		10		30
Girls	10		3	5	4	
Total		10	8		12	60

3

	Walk	Car	Cycle	Train	Bus	Totals
Male students	10	2	8	3		
Female students		1	6		4	25
Male teachers		10		8		25
Female teachers	3		1	5	3	25
Total	23		18	22	11	100



# **REVIEW EXERCISE 19**

1

	Tea bags	Packet tea	Instant tea	Total
50 g	2	0	5	
100 g	35	20		60
200 g	15			
Total		25		100

2

	French	German	Spanish	Total
Female	15			39
Male		17		41
Total	31	28		80

[Edexcel]

5

Plain	Chicken	Bovril	Salt & Vinegar	Plain
Salt & Vinegar	Plain	Chicken	Plain	Bovril
Plain	Chicken	Bovril	Salt & Vinegar	Bovril
Bovril	Plain	Plain	Salt & Vinegar	Plain

Flavour of crisps	Tally	Frequency
Plain		
Chicken		
Bovril		
Salt & Vinegar		

11

	School dinners	Sandwiches	Other	Total
Boys	12	3		16
Girls	8		2	
Total				30





## ▶▶ EXERCISE 20.4

1

Number of bedrooms	Frequency	
1	10	
2	22	
3	43	
4	13	
5	9	
6	3	
Total		

2

Number of occupants	Frequency	
1	7	
2	14	
3	10	
4	9	
5 or more	0	
Total		

3

Number of eggs	Frequency	
1	4	
2	7	
3	10	
4	16	
5	25	
6	27	
7	10	
8	5	
9	6	
Total		

## ▶▶ EXERCISE 20.5

1

Length of cucumber ( $L$ ) in cm	Frequency	Midpoint	
$20 \leq L < 22$	2		
$22 \leq L < 24$	5		
$24 \leq L < 26$	8		
$26 \leq L < 28$	4		
$28 \leq L < 30$	1		
Total			

(continued)



## ▶▶ EXERCISE 20.5 (continued)

2

Number of people at work	Frequency	Midpoint	
25 to 29	3		
30 to 34	7		
35 to 39	11		
40 to 44	4		
Total			

3

Age ( $A$ ) in years	Frequency	Midpoint	
$20 \leq A < 30$	4		
$30 \leq A < 40$	7		
$40 \leq A < 50$	6		
$50 \leq A < 60$	3		
$60 \leq A < 70$	1		
Total			

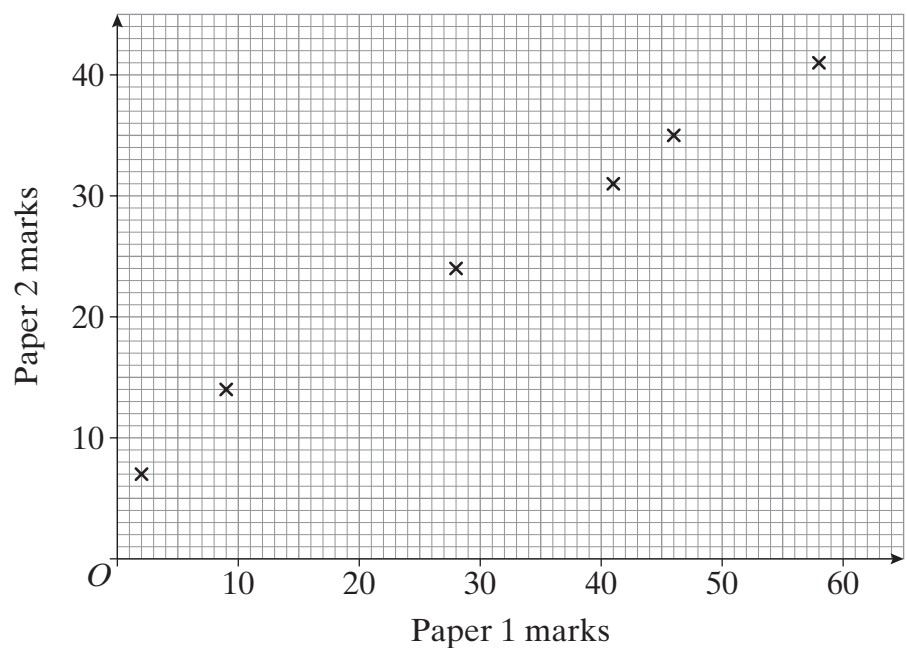
4

Time ( $T$ ) in minutes	Frequency	Midpoint	
$5 \leq T < 10$	2		
$10 \leq T < 15$	5		
$15 \leq T < 20$	9		
$20 \leq T < 25$	7		
$25 \leq T < 30$	4		
Total	27		



▶▶ **EXERCISE 20.6**

2

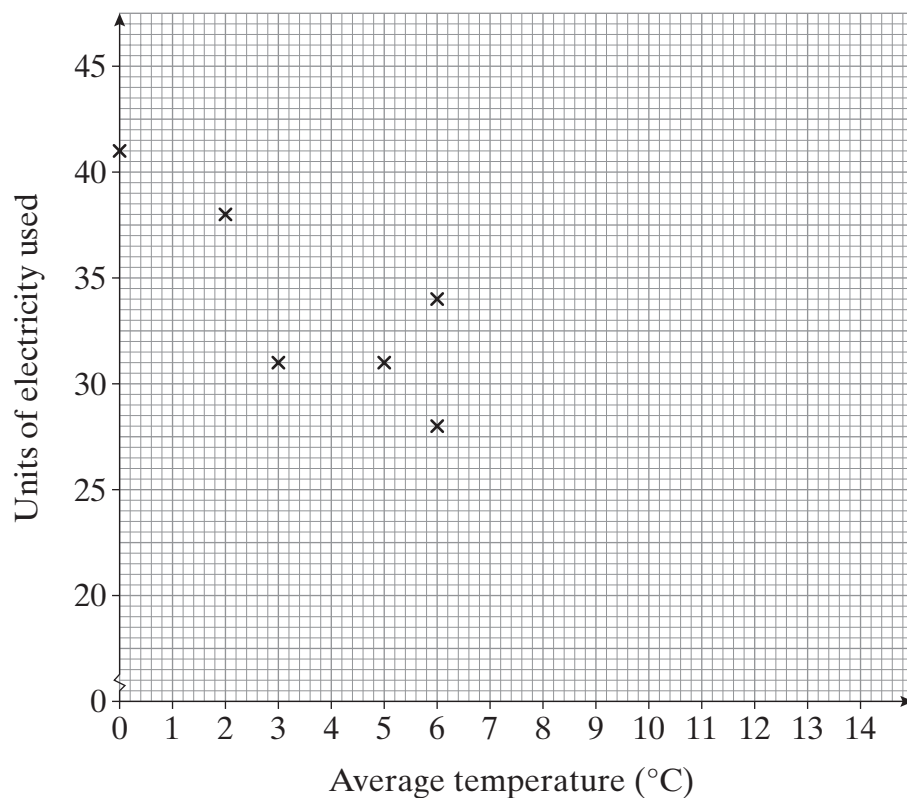


	Student A	Student B
Paper 1 mark	20	50
Paper 2 mark	20	35

[Edexcel]

3

Average temperature (°C)	6	2	0	6	3	5	10	8	9	12
Units of electricity used	28	38	41	34	31	31	22	25	23	22



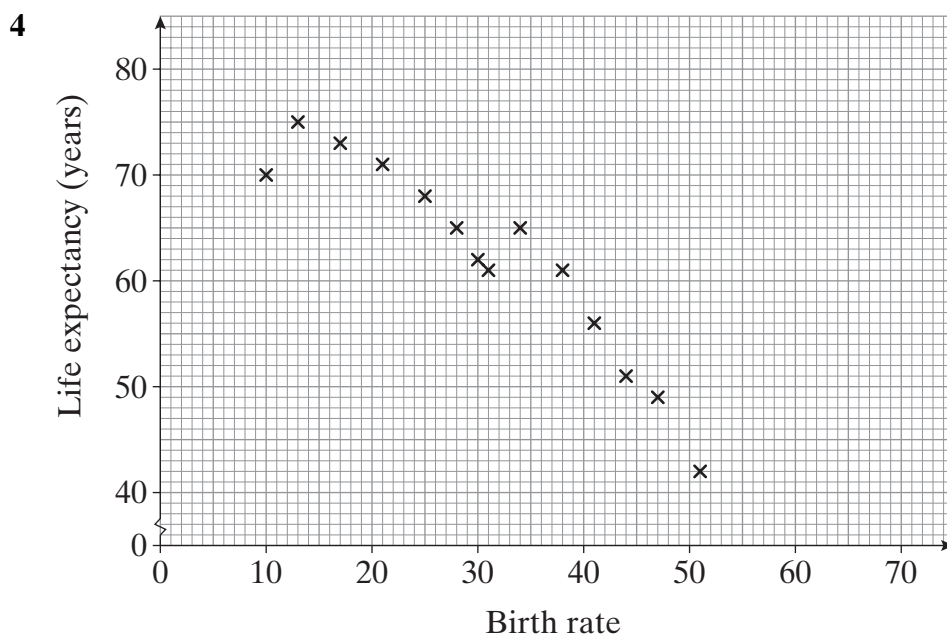
[Edexcel]

(continued)

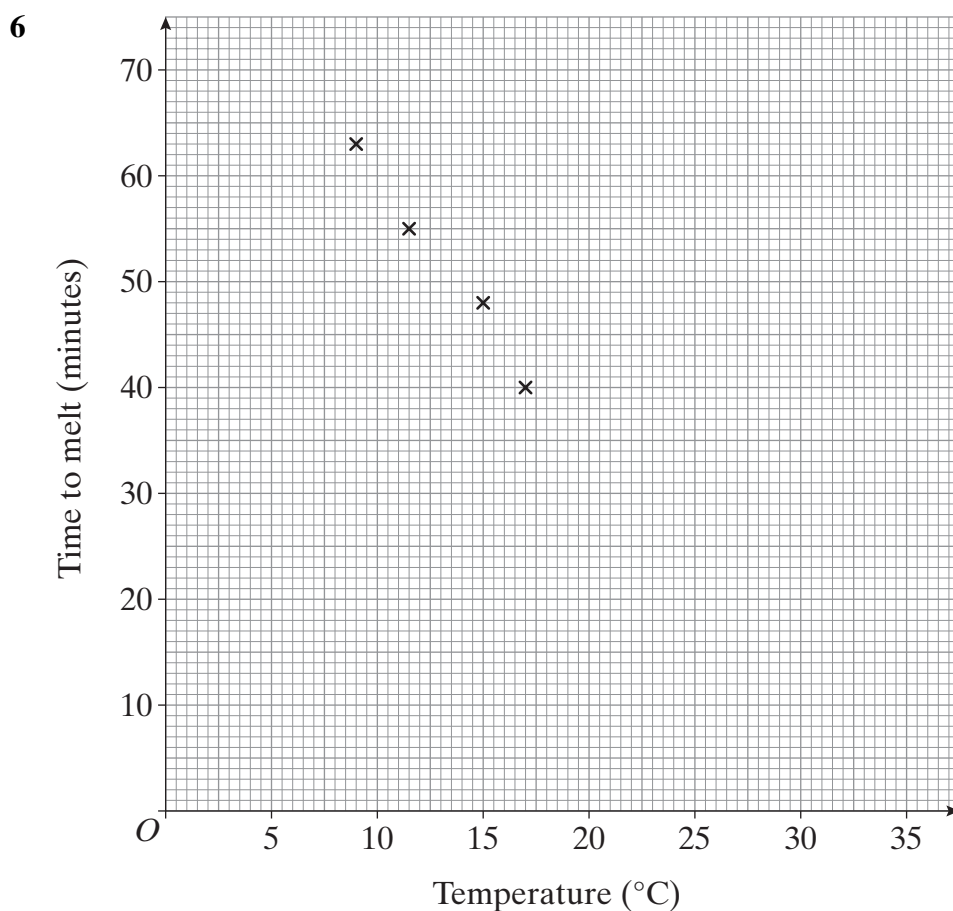




## EXERCISE 20.6 (continued)



[Edexcel]



Temperature (°C)	9	11.5	15	17	20	21	26
Time (minutes)	63	55	48	40	30	25	12.5

[Edexcel]

(continued)

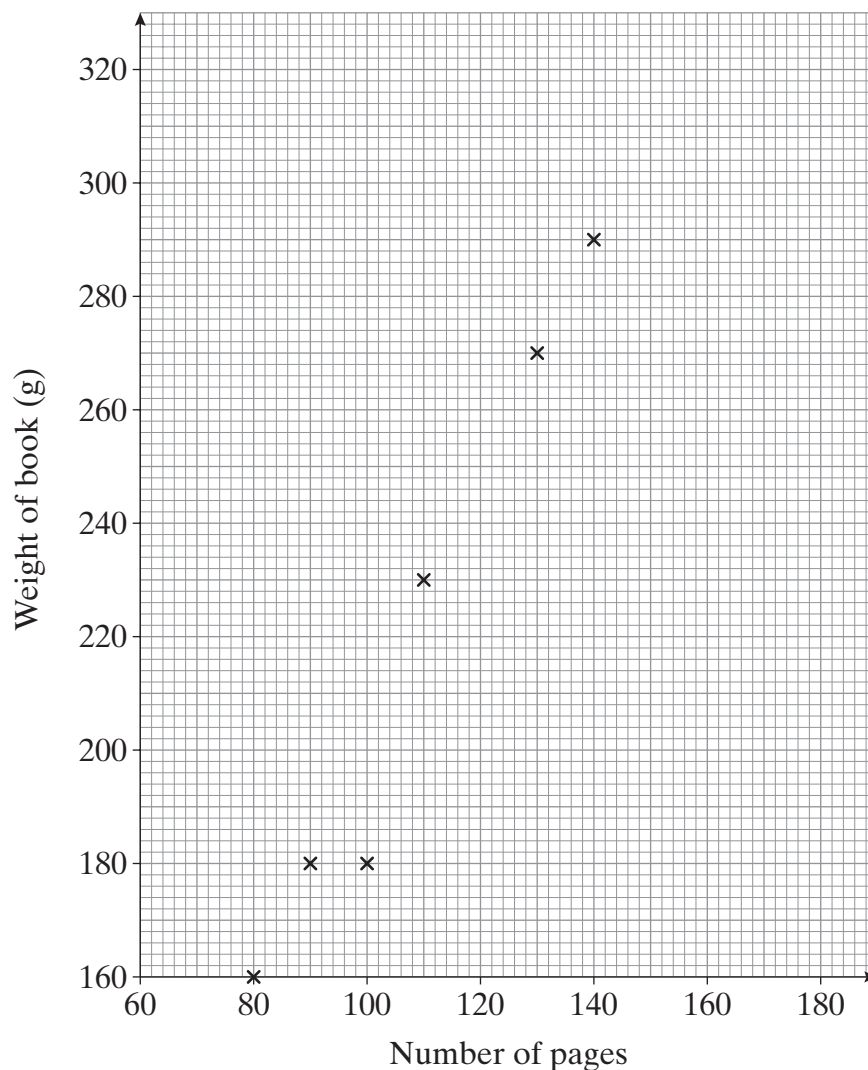




## ►► EXERCISE 20.6 (continued)

7

Number of pages	80	130	100	140	115	90	160	140	105	150
Weight (g)	160	270	180	290	230	180	320	270	210	300



## ►► REVIEW EXERCISE 20

3

Number of drawing pins	Frequency
29	2
30	5
31	2
32	1

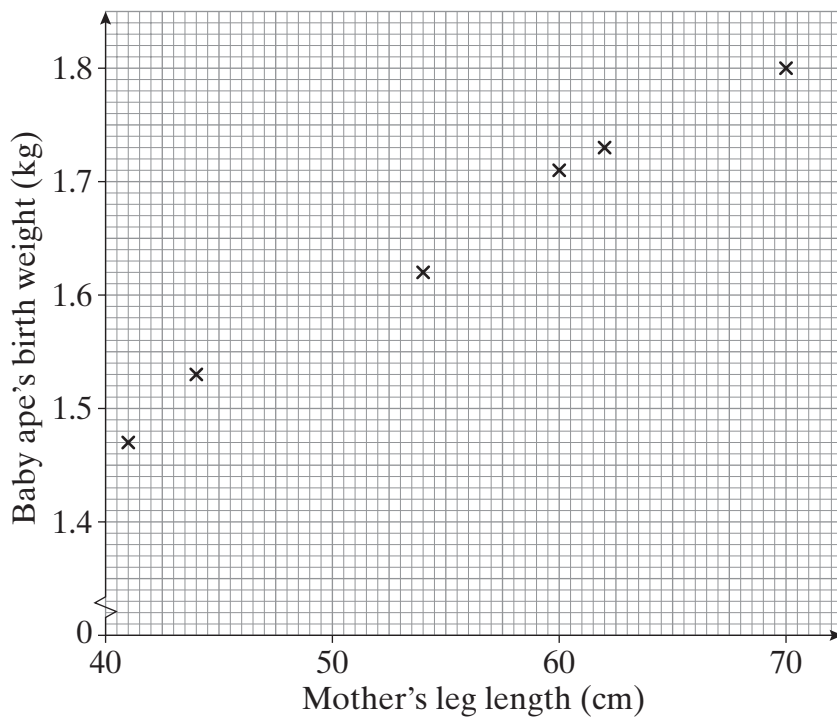
[Edexcel]



## REVIEW EXERCISE 20 (continued)

4

Mother's leg length (cm)	50	65
Baby ape's birth weight (kg)	1.6	1.75



[Edexcel]

5

Goals scored	Number of students
1	9
2	3
3	5
4	3

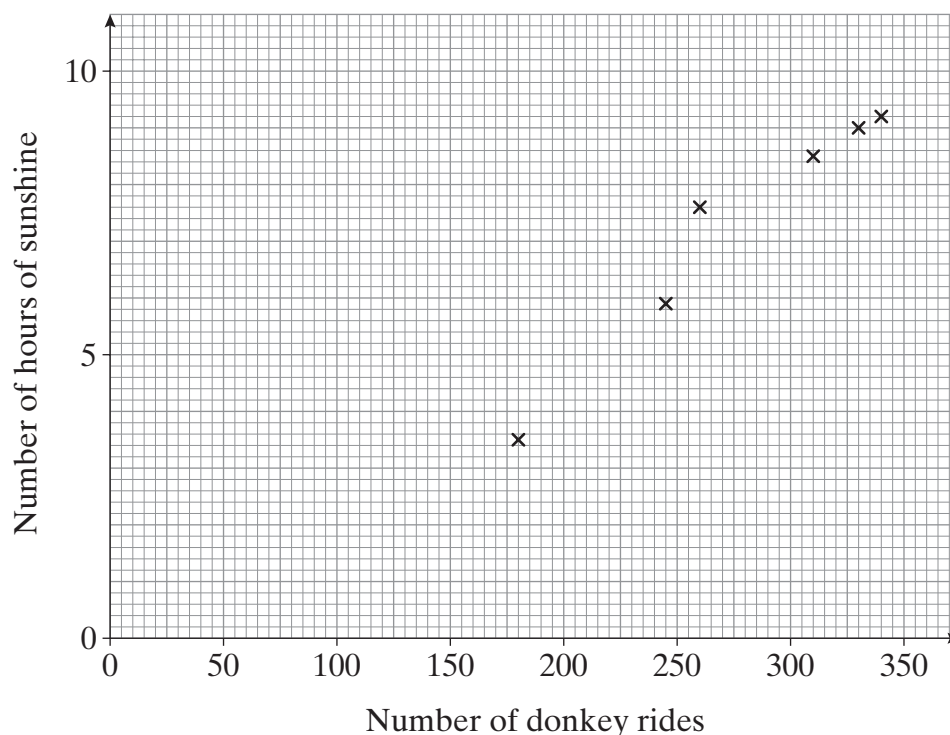
[Edexcel]



## ►► REVIEW EXERCISE 20 (continued)

8

Number of donkey rides	130	185	210	220
Number of hours of sunshine	3	4	5	5.5



[Edexcel]

## ►► INTERNET CHALLENGE 20


	Name of country	Population in millions	Area in millions of square kilometres
1	China		
2	India		
3	United States of America		
4	Indonesia		
5	Brazil		
6	Pakistan		
7	Bangladesh		
8	Russia		
9	Nigeria		
10	Japan		
11	Mexico		
12	Philippines		






























## EXERCISE 21.1

2


Week no.	No. CDs sold
Week 7	300
Week 8	575

 = 100 CDs

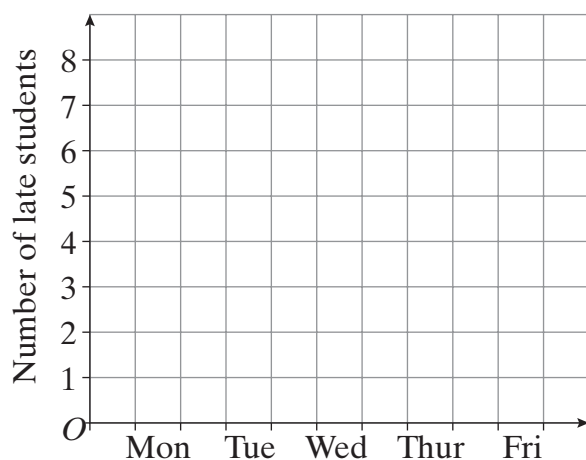
Week 1	   
Week 2	   
Week 3	 
Week 4	      
Week 5	    
Week 6	    
Week 7	
Week 8	

5

Type of book	Number of sales
Fiction	
Children's books	
Biographies	
Science fiction	
Crime fiction	
Non-fiction	

 = 4 sales

6

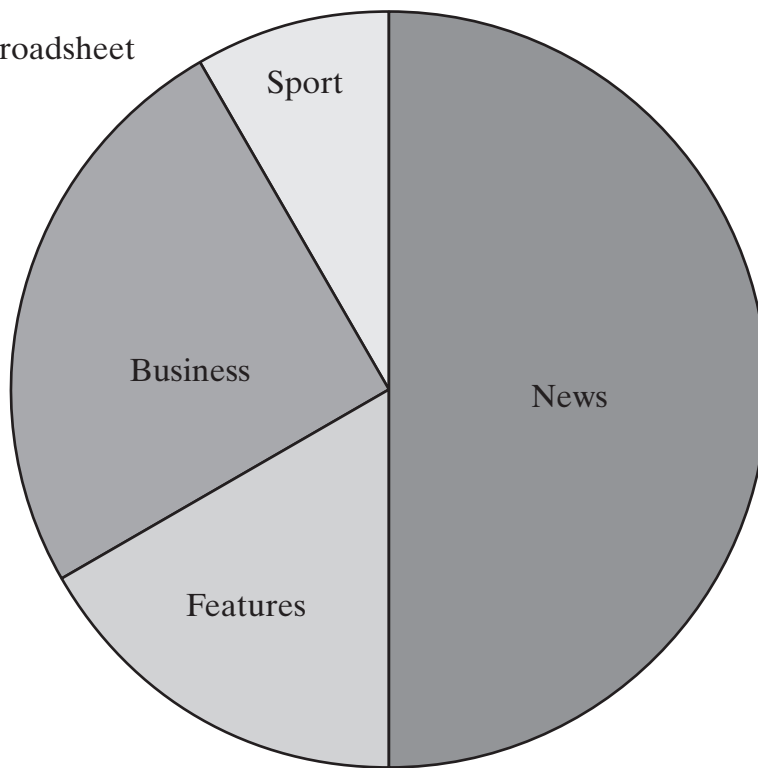




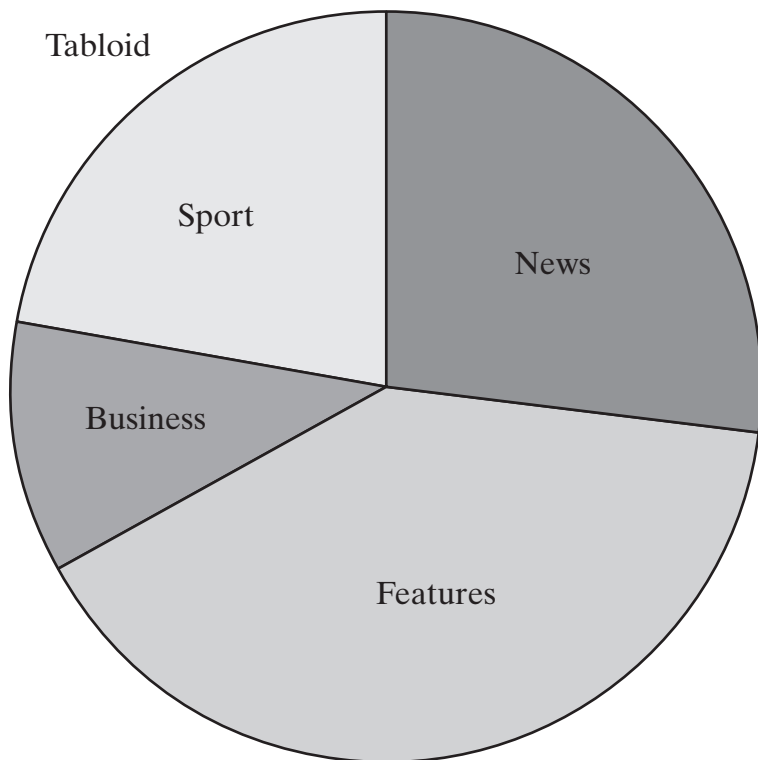
## ▶▶ EXERCISE 21.2

7

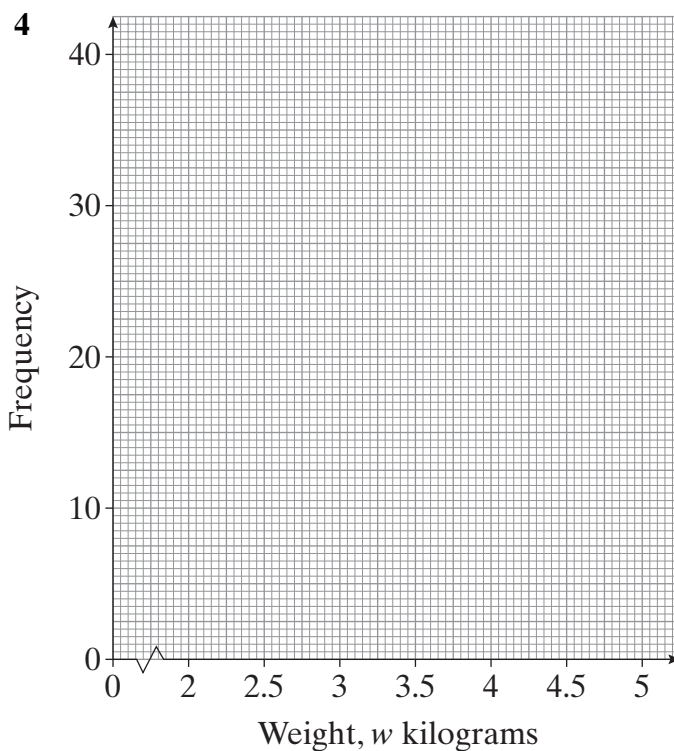
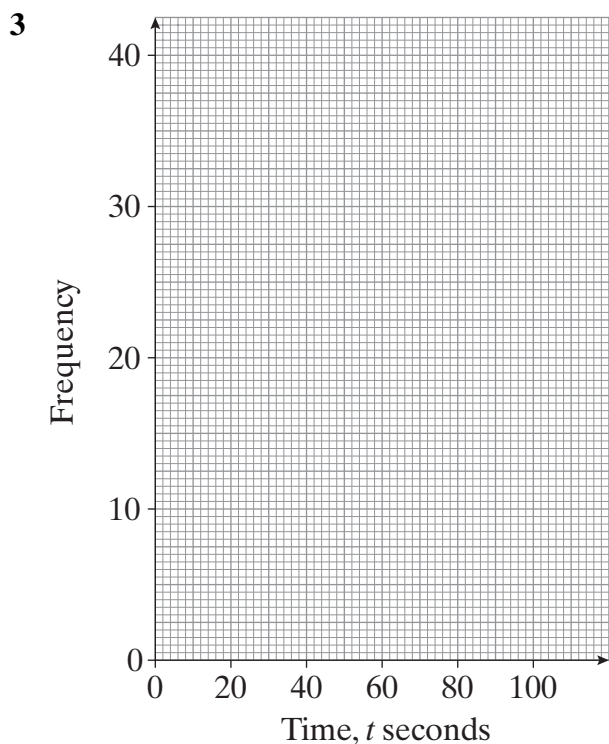
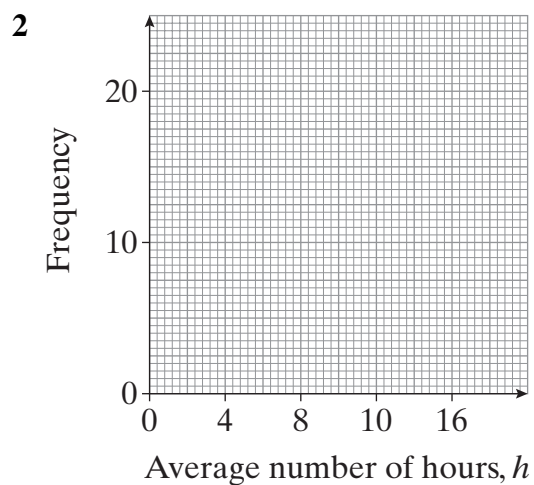
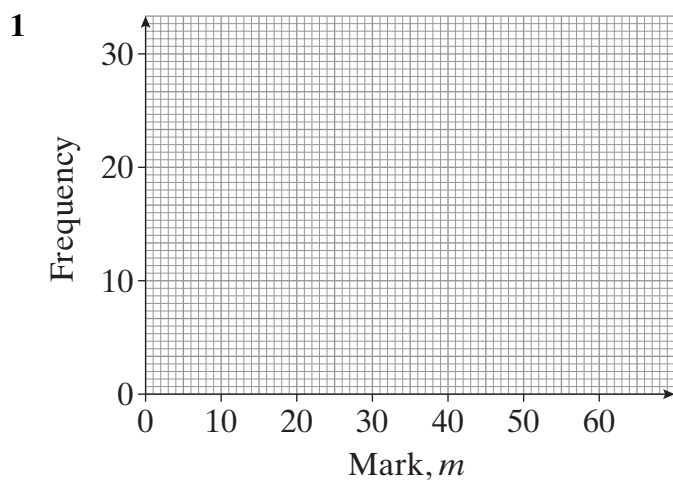
Broadsheet



Tabloid

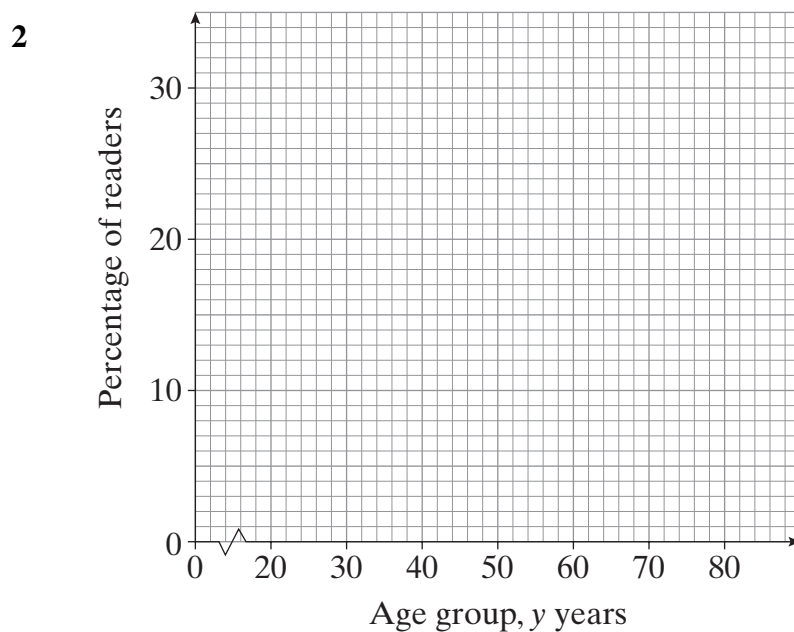
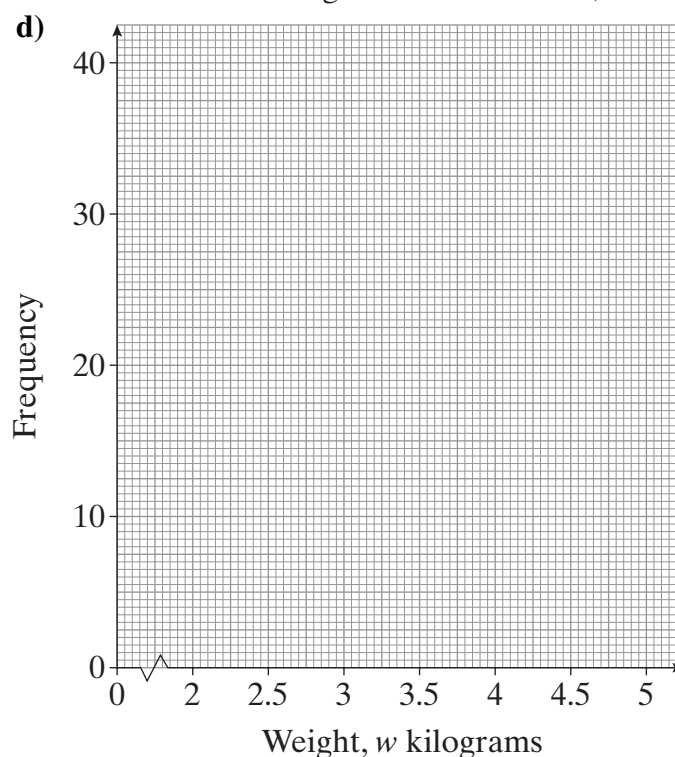
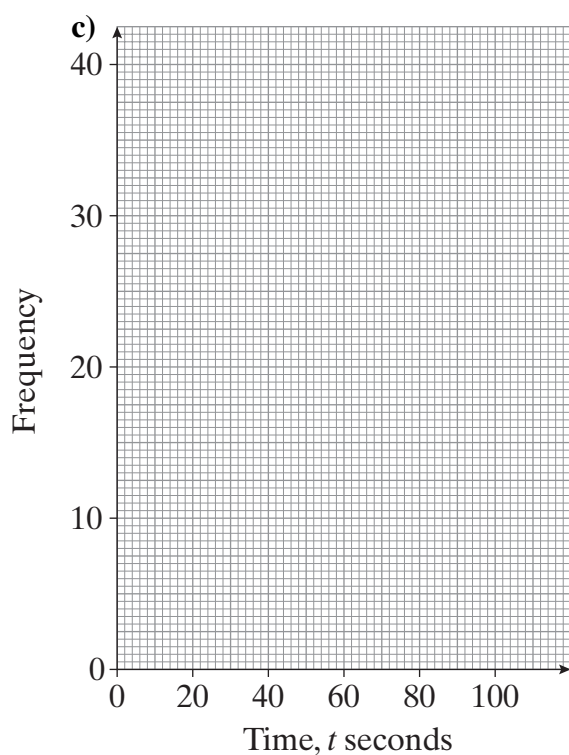
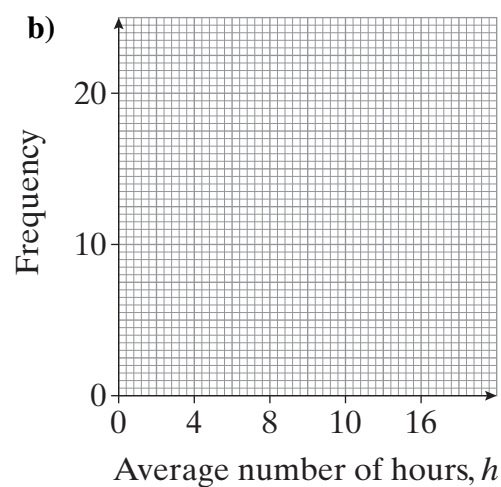
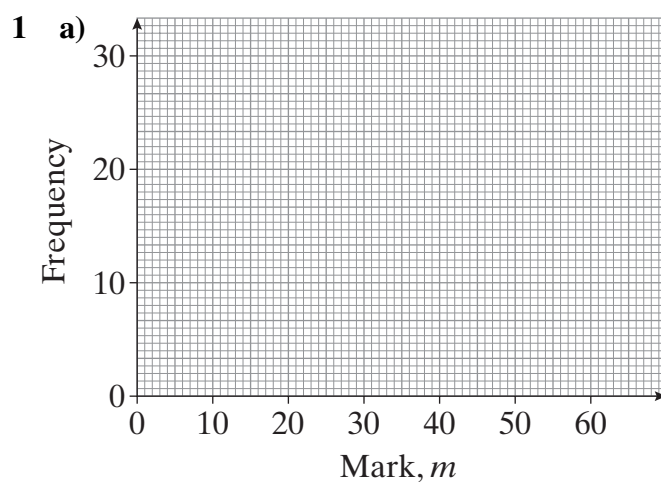


# **EXERCISE 21.3**





## ▶▶ EXERCISE 21.4



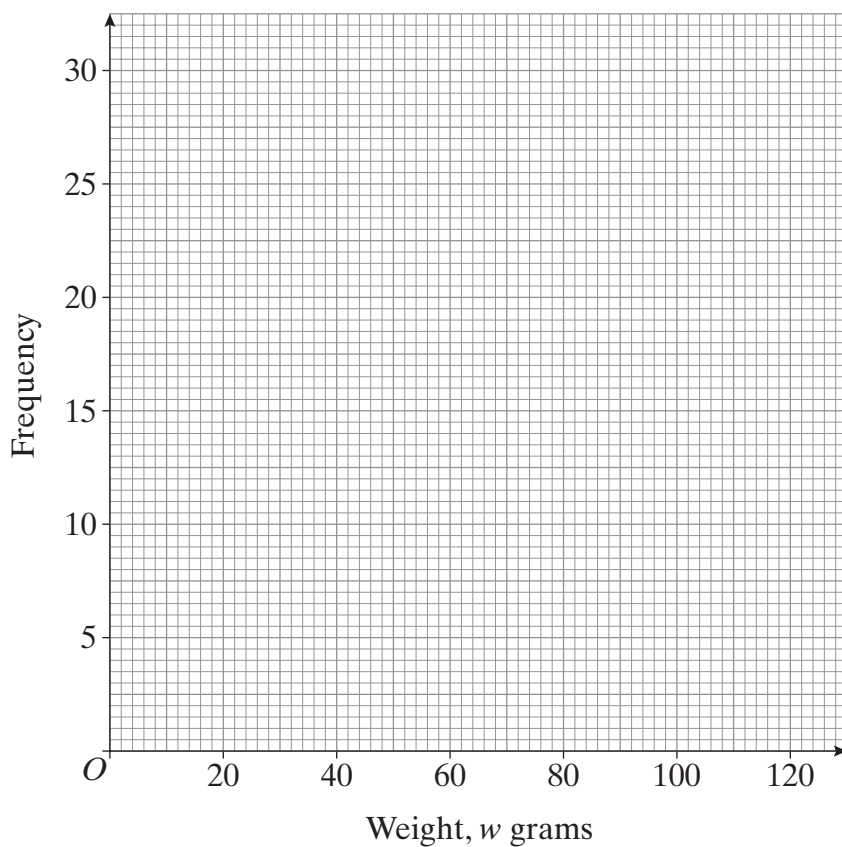
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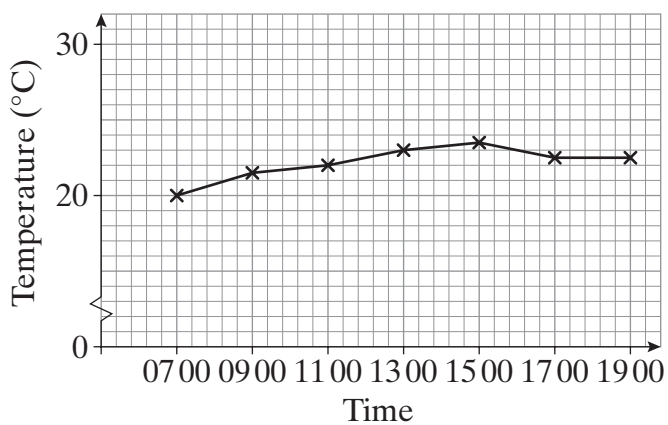
# **EXERCISE 21.4 (continued)**

3

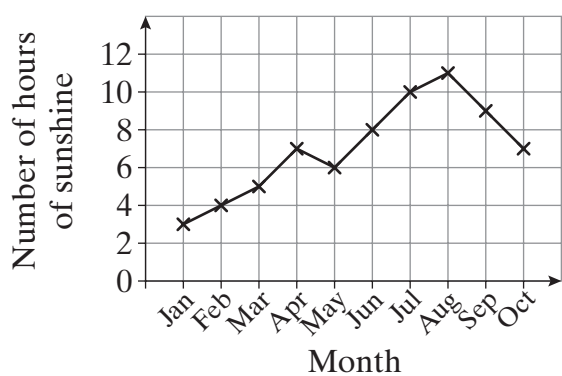


# **EXERCISE 21.5**

1



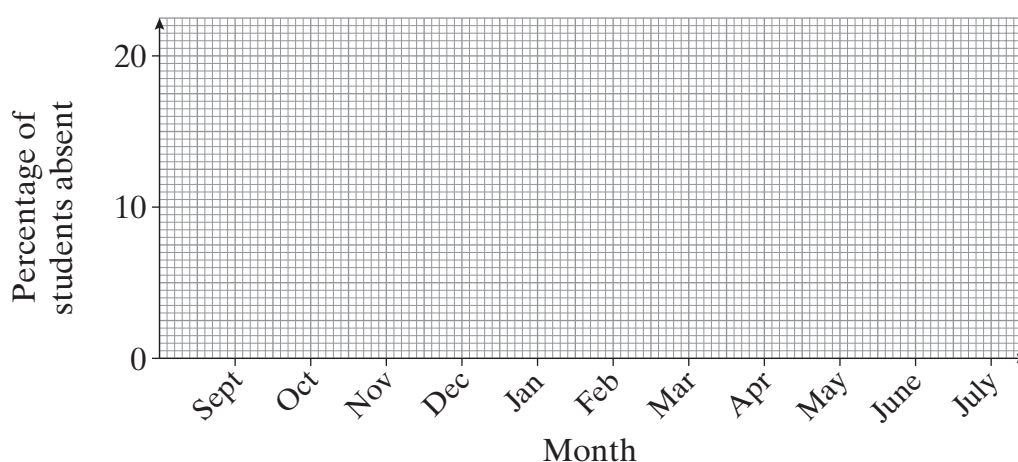
2





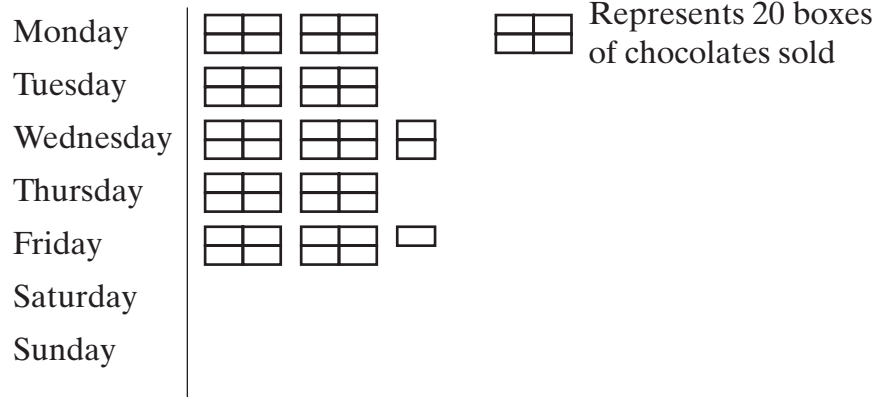
## ▶▶ EXERCISE 21.5 (continued)

3



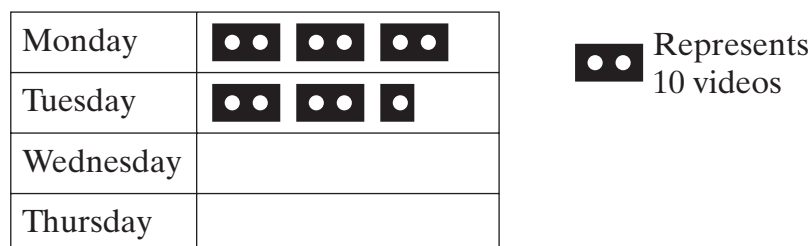
## ▶▶ REVIEW EXERCISE 21

1



[Edexcel]

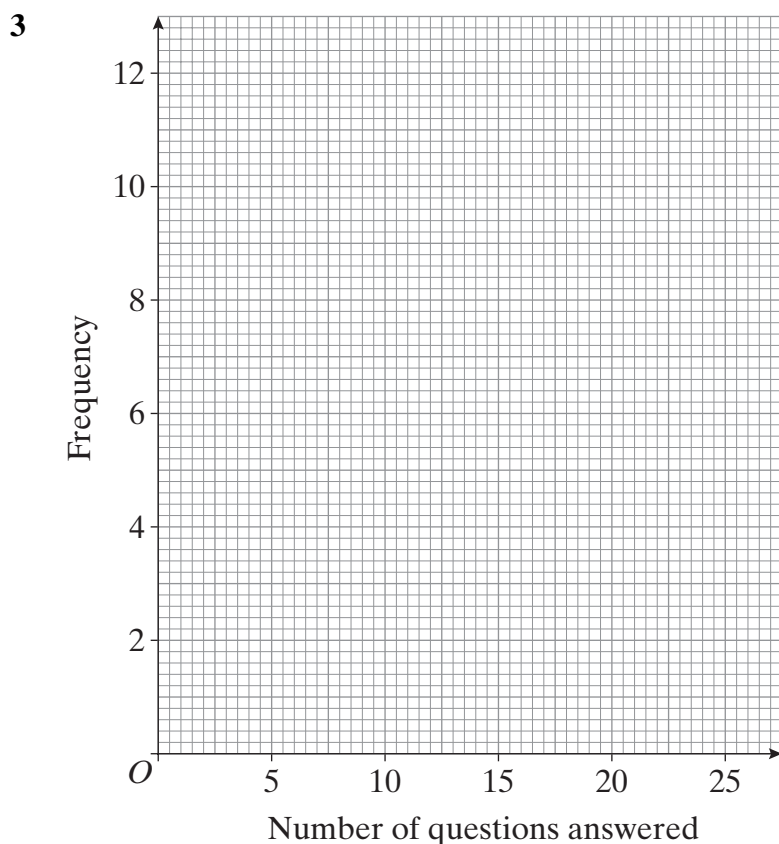
2



[Edexcel]

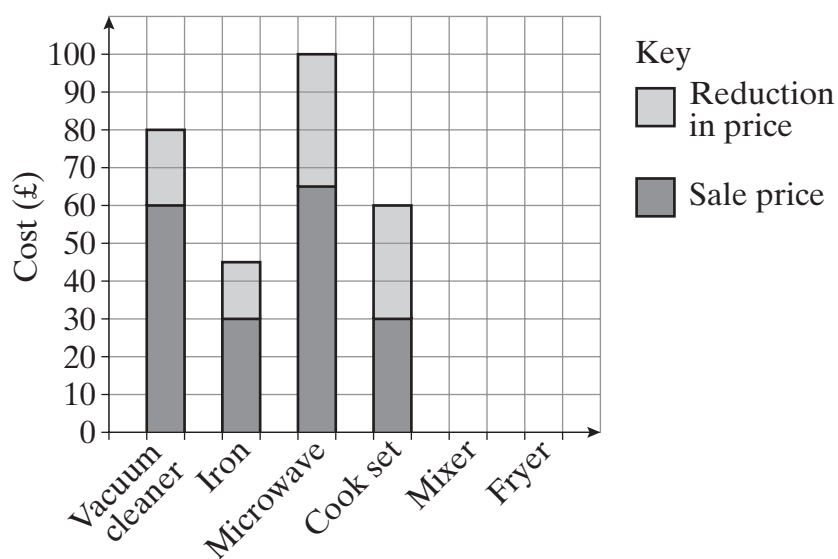


## ▶▶ REVIEW EXERCISE 21 (continued)



[Edexcel]

6 e)

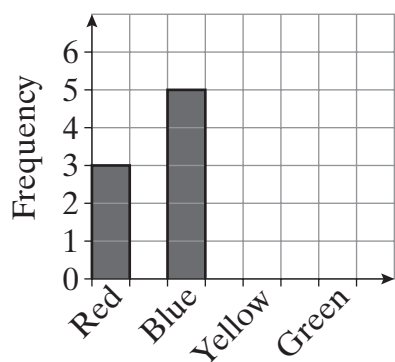


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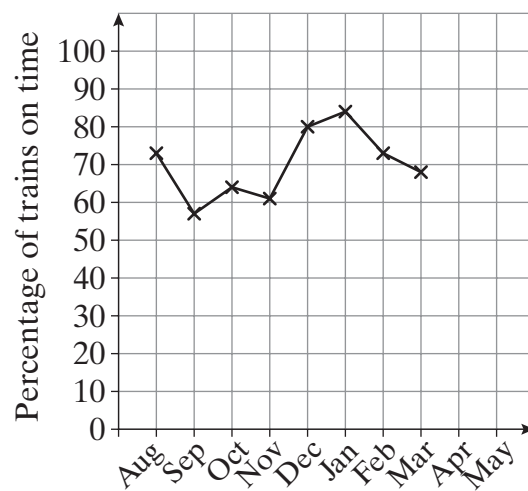
## REVIEW EXERCISE 21 (continued)

8



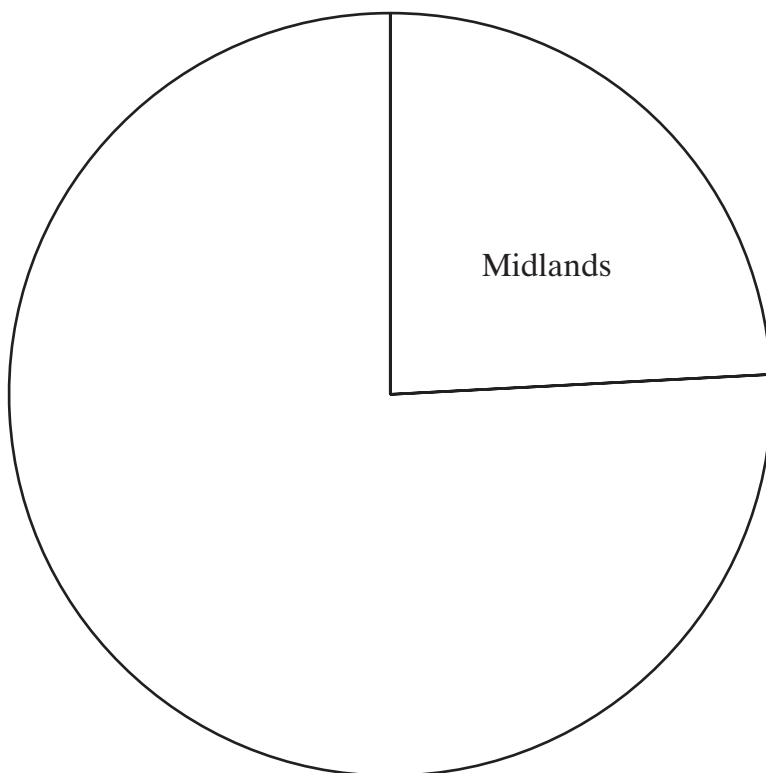
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9



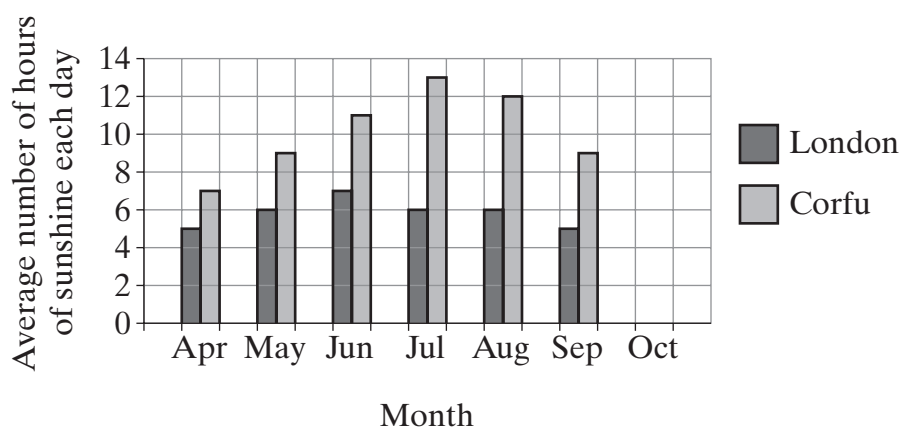
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10



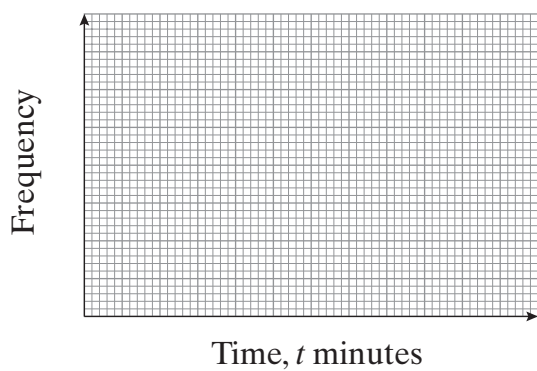
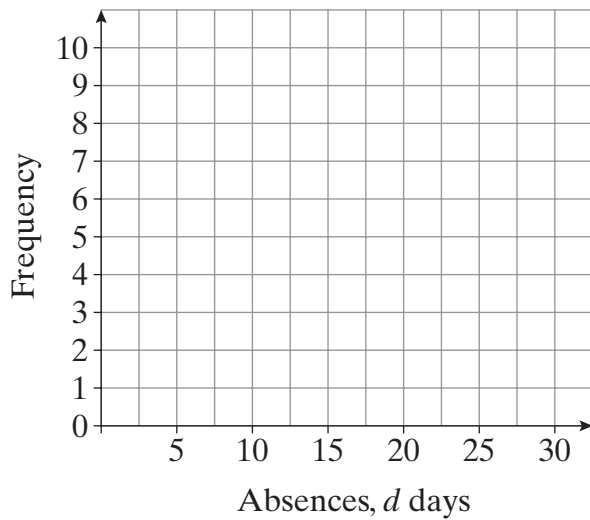
[Edexcel]

11



[Edexcel]



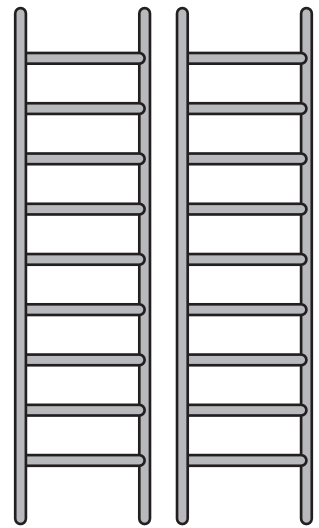
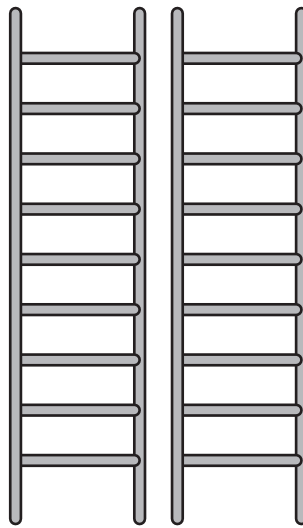
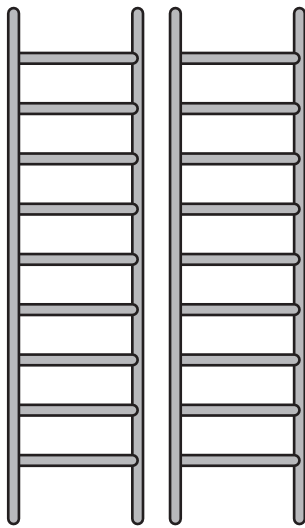
**▶▶ REVIEW EXERCISE 21 (continued)****12****13**

[Edexcel]



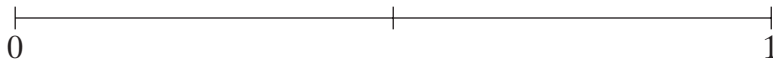


## ►► 22 STARTER

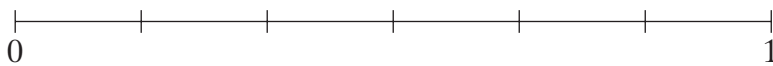


## ►► EXERCISE 22.1

2



3



4



## EXERCISE 22.2

1

	Red	Blue	Total
Triangle			
Cross			
Total			

2

	Science	History	Total
Hardback	10	18	
Paperback	20		
Total	30	50	80

4

	Tea	Coffee	Other	Total
Morning	78	32		110
Afternoon	22		20	
Total		80	20	200

## EXERCISE 22.3

1

+	1	2	3	4	5	6
1	2					
2						
3					8	
4		6				
5						
6						12

(continued)





## ▶▶ EXERCISE 22.3 [continued]

3

+	1	2	3	4	5	6
1	1					
2						
3					15	
4		8				
5						
6						36

5

Difference	1	2	3	4	5	6
1	0					5
2						
3					2	
4						
5			2			
6	5				1	

## ▶▶ EXERCISE 22.5

7

Type of bird	Blackbird	Sparrow	Starling	Robin
Probability	0.35	0.25		0.1

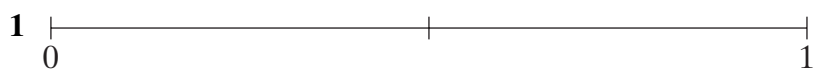
12

Year group	First year	Second year	Third year
Probability	36%	33%	

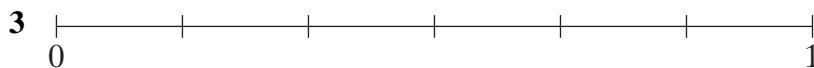




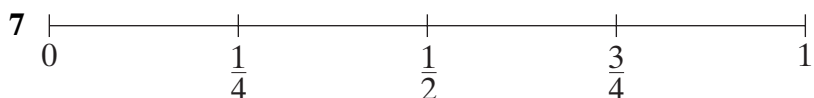
# **REVIEW EXERCISE 22**



[Edexcel]



[Edexcel]



[Edexcel]

8

	White	Black
Circle		
Square		

[Edexcel]

11

		Spinner B			
Spinner A	×	1	2	3	4
	1				
	2				8
	3				

[Edexcel]

14

+	1	2	3	4	5	6
1	2					
2						
3					8	
4		6				

[Edexcel]

15

	France	Germany	Spain	Total
Female			9	34
Male	15			
Total		25	18	60

[Edexcel]



## INTERNET CHALLENGE 22

### Probability wordsearch

Here are some words and phrases that are used in probability.

Find them in the wordsearch diagram, then write down the meaning of each one.

You may need to use the internet to check some of the meanings.

D	U	W	A	F	J	Q	Y	U	I	F	F	E	N	E	C	B
B	I	A	S	F	S	F	J	T	R	I	A	L	D	E	K	L
T	S	R	M	M	A	A	L	C	L	I	U	O	R	A	V	A
Y	T	R	S	K	Y	I	S	P	C	V	E	T	E	G	H	Y
F	S	A	E	V	I	R	P	O	C	E	A	J	D	R	E	V
Y	W	I	X	N	W	B	Q	I	S	I	E	E	H	A	K	T
E	C	I	D	J	N	A	O	U	N	D	B	F	R	N	E	N
J	A	N	Y	E	V	I	B	R	S	I	I	E	H	D	B	O
D	X	D	F	R	T	Y	P	O	N	G	O	R	F	O	T	T
G	O	E	C	S	E	E	J	S	C	R	U	M	E	M	W	A
B	H	P	E	S	X	J	I	U	R	E	C	F	U	T	Y	T
I	W	E	V	E	N	C	H	A	N	C	E	J	U	N	G	N
D	U	N	E	N	D	I	V	E	R	T	W	Q	U	I	R	E
E	E	D	V	Q	P	R	E	M	O	C	T	U	O	T	Y	V
A	R	E	Y	H	A	L	F	O	M	O	T	O	G	G	R	E
L	F	N	O	D	E	Y	I	D	X	V	E	N	T	Y	S	R
M	U	T	U	A	L	L	Y	E	X	C	L	U	S	I	V	E

BIAS  
CERTAIN  
DICE

EVEN CHANCE  
EVENT  
FAIR

INDEPENDENT  
MUTUALLY EXCLUSIVE  
OUTCOME

RANDOM  
SPINNER  
TRIAL





## ►► Isometric dot paper

