

## UNIT 8 *Data Handling*

## Overhead Slides

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### **Overhead Slides**

- 8.1 Distance Charts
- 8.2 Pie Charts
- 8.3 Birthdays
- 8.4 Biased Questions
- 8.5 Histograms
- 8.6 Table of Random Numbers

# OS 8.1

## Distance Charts

The table gives distances in miles between towns marked on this map of England, Scotland and Wales.

	Aberdeen										
517	Bristol										
537	47	Cardiff									
235	282	302	Carlisle								
126	381	401	99	Edinburgh							
149	382	402	99	46	Glasgow						
356	172	192	121	220	220	Mar					
369	183	203	163	240	263	37	Sheffield				
572	76	141	337	436	437	227	208	Southampton			
549	120	156	314	413	414	203	169	80	London		



- What is the distance between

  - (a) Aberdeen and London,
  - (b) Cardiff and London
  - (c) Edinburgh and Sheffield?
- Find the total distance travelled on the route

London - Sheffield - Edinburgh - Glasgow - Carlisle - Manchester -  
Cardiff - Bristol - London

## OS 8.2

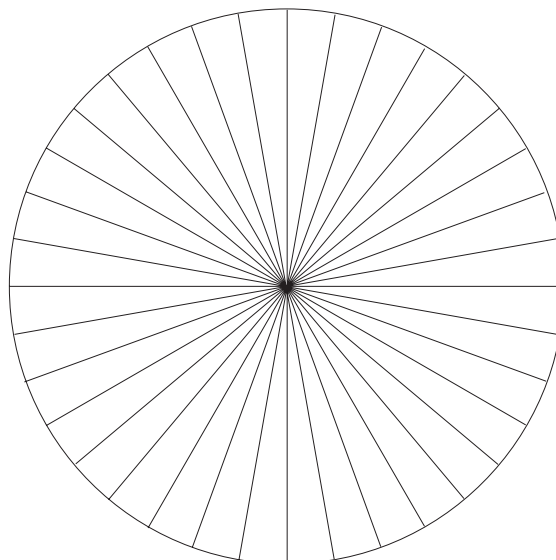
## Pie Charts

Here is a table of time spent by a pupil on homework one evening.

<i>Subject</i>	<i>Maths</i>	<i>English</i>	<i>Science</i>	<i>Technology</i>	<i>French</i>	<i>Geography</i>
<i>Time (mins)</i>	50	20	30	20	30	30

Represent the data with a pie chart.

<i>Subject</i>	<i>Time (mins)</i>	<i>Fraction of total time</i>	<i>Angle</i>
Maths	50	$\frac{50}{180}$	$\frac{50}{180} \times 360^\circ = 100^\circ$
English	20		
Science	30		
Technology	20		
French	30		
Geography	30		
<b>Total</b>	180		



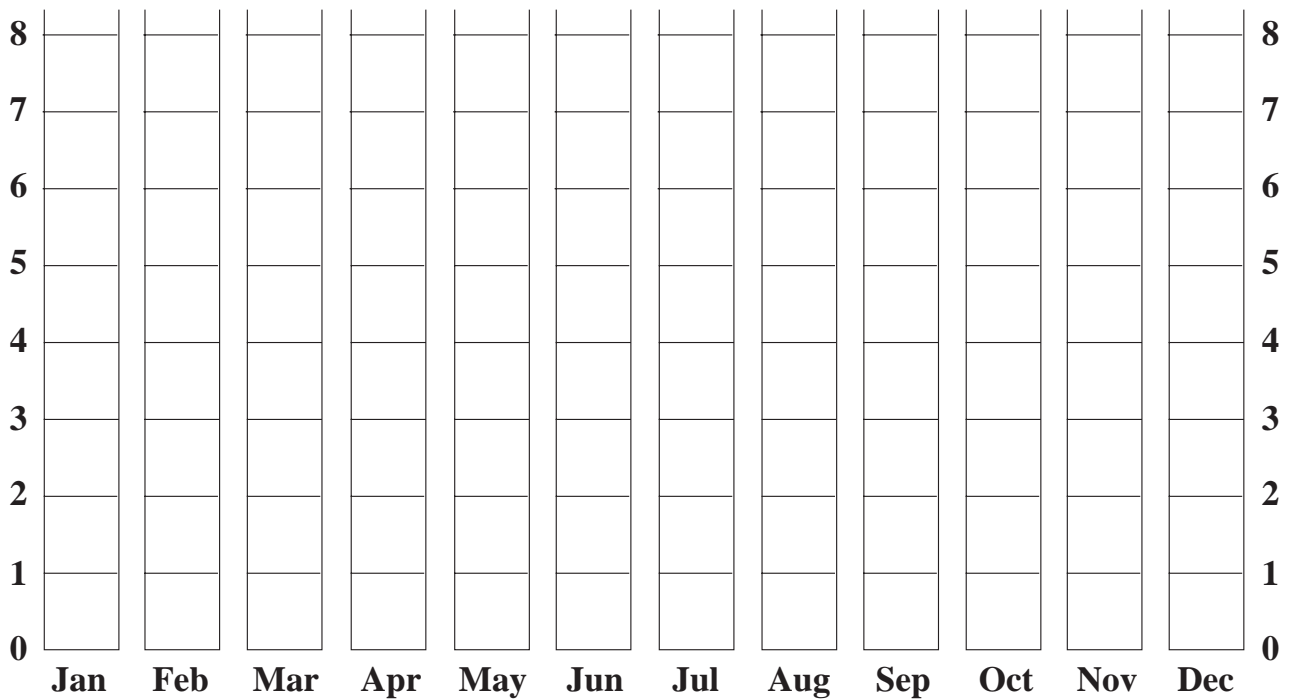
# OS 8.3

## *Birthdays*

*Tally Chart*

		Total
<b>Jan</b>		
<b>Feb</b>		
<b>Mar</b>		
<b>Apr</b>		
<b>May</b>		
<b>Jun</b>		
<b>Jul</b>		
<b>Aug</b>		
<b>Sep</b>		
<b>Oct</b>		
<b>Nov</b>		
<b>Dec</b>		

*Bar Chart*



**OS 8.4***Biased Questions*

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Rewrite these questions so as to make them all unbiased.

1. Do you think that we do enough work in school and that homework is unnecessary?
2. Should the Government spend more money on education?
3. Should the Prime Minister avoid paying income tax?
4. Should nurses get a bigger pay increase than MPs?
5. Should there be yet more sport on TV?
6. Do we really need a Royal Family in the 21st century?
7. Do you agree that Manchester United are clearly the best football team in the country?
8. Do you think that it makes sense for the UK to continue its membership of the EU?

# OS 8.5

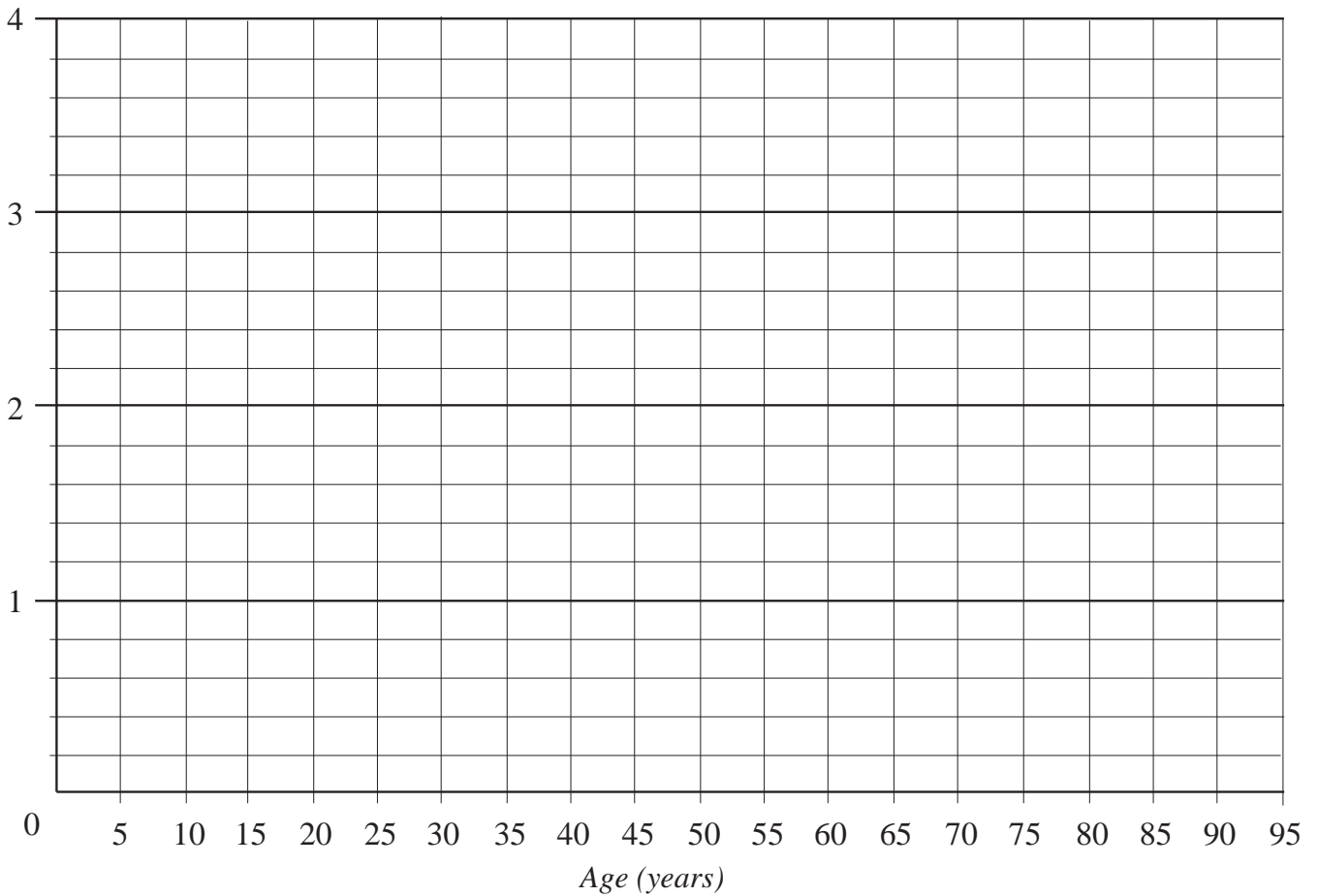
## *Histograms*

The age profile of the population of a small village is shown below.

Calculate the relative frequencies and draw a histogram to illustrate the data.

<i>Age</i>	0 - 4	5 - 14	15 - 24	25 - 44	45 - 64	65 - 94
<i>Frequency</i>	20	25	24	33	27	12
<i>Relative frequency</i>						

*Relative frequency*



## OS 8.6

*Table of Random Numbers*


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93319	51747	56137	84026	09938	33225	09260	99111	95811	65380
66963	84712	47728	09302	97054	18325	39521	09998	13502	03175
32402	79709	90355	63399	65756	88808	03729	68890	53723	54769
54957	86171	49491	66036	18419	76886	79804	58345	95727	43667
08145	65172	33770	22459	81756	34626	12437	77989	93784	63509
68822	62237	97229	84879	85615	27975	08792	06415	97140	18104
12863	24668	57894	41004	71069	88470	10189	64518	96966	05133
61482	50377	82349	42127	20668	79952	63515	31342	86673	73307
27435	16613	17128	95452	16456	07938	38823	56349	61056	39089
90894	90120	81304	97886	30899	90879	76106	42547	61752	83702
91542	63732	52826	13498	15318	32814	17932	81000	36354	62391
61541	21834	16647	45699	68935	19547	29529	16353	73731	23654
00721	61877	13197	61565	90793	22343	47901	27820	29716	64722
58234	83176	07400	93972	12910	26171	62233	48527	22017	86412
90901	96697	93813	92525	38424	83822	12367	92113	58091	73871
84138	49154	11998	28475	43363	40909	74679	82072	32902	33021
99982	38394	12149	92320	45068	56675	15303	61472	20199	77634
55118	33697	88713	83980	35348	99632	79747	67890	66721	52867
44596	57212	94875	90894	75242	16150	80707	84160	49579	45894
69441	12716	60696	90838	22693	56043	56973	12863	04986	30644
65987	65511	94550	58344	41328	95482	31816	96121	95629	61646
30442	37490	00651	19619	69512	56027	49675	69408	54436	11548
31841	63651	72390	47059	10040	55521	86911	23854	51584	41387
25590	26741	75800	15745	69549	91253	80164	11724	45069	04435
94224	21091	04534	84401	76736	29703	52139	31717	28279	93696
52985	99052	71324	15364	26327	39095	26028	29939	23509	13451
73517	02148	31714	13119	15732	45512	68301	89041	38890	81037
22887	10718	31454	52309	06514	42507	75468	48605	06298	18200
76438	04101	75458	55270	99354	51854	74394	43987	63733	27449
14482	91534	34322	58089	96509	13719	73664	68489	82340	88210
35831	77045	25029	98535	03402	70868	04587	48599	47285	46148
87857	90657	80145	26419	21262	28733	28579	43054	61071	91889
29247	64438	86175	87703	83446	67031	54625	99997	35700	91742
47772	29667	93738	68677	99266	49739	67150	90133	30988	31886
95635	92152	39697	58015	36592	55997	19531	65129	89328	61894
50339	66056	60354	65281	29894	37775	34516	11016	69852	54617
67913	58978	35732	47891	64046	04856	97359	73264	19503	37402
80090	57366	79265	48560	14360	87736	91582	27931	38780	05247
13249	74207	05827	30621	83365	47467	32843	91140	18080	40854
76852	80223	46216	65444	64815	81402	50385	77524	73167	43195
16731	07241	55052	54549	92503	74292	68834	89765	41287	36098
98006	83605	33978	33014	52325	17769	53144	13260	34459	85508
56587	43498	48494	71779	58770	27636	32147	99218	01012	26591
83471	72666	64849	24946	63288	51123	85098	50281	64871	47266
52502	18474	08744	40914	79954	28137	63705	89423	49704	90259
03846	57786	80554	51830	19528	19318	70590	50811	50034	99810
40864	30009	89931	33920	20729	04074	14893	06818	83086	36458
37140	43492	22727	88547	56098	32953	53634	91516	82806	39158
35137	83718	60390	45365	31548	65730	64725	96106	70568	79585
26709	48705	88170	52680	26408	18142	71563	73812	87382	45203

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