2.19 Population Pyramids: 30-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A population pyramid for Island E shows the number of males (left) and females (right) in each age group.

Age group	Males	Females
0 to 19	390	190
20 to 39	480	400
40 to 59	550	150
60 and over	600	250

(a) Work out the number of people aged 60 and over.

(b) Write this as a percentage of the whole population. Give your answer to 1 decimal place.

(Total for Question 1 is 3 marks)

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2 In a pie chart about how a company's staff spend lunch breaks, the sector for outside has an angle of 144 degrees and 12 people chose outside. The sector for desk has an angle of 72 degrees.

(a) Write the outside sector as a percentage of the whole.

(b) How many people chose desk?

(Total for Question 2 is 4 marks)

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3 A population pyramid for Town A shows the number of males (left) and females (right) in each age group.

Age group	Males	Females
0 to 19	140	490
20 to 39	290	480
40 to 59	250	510
60 and over	190	560

(a) Work out the total population of Town A.

(b) How many more females than males are aged 0 to 19? (Write the difference, with a negative sign if there are fewer females.)

(Total for Question 3 is 4 marks)

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4 A population pyramid for County D shows the number of males (left) and females (right) in each age group.

Age group	Males	Females
0 to 19	350	280
20 to 39	460	510
40 to 59	190	320
60 and over	600	220

(a) Work out the total population of County D.

(b) How many more females than males are aged 20 to 39? (Write the difference, with a negative sign if there are fewer females.)

(Total for Question 4 is 4 marks)

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5 A pie chart shows types of film chosen at a cinema. The angles of the sectors are in the table.

Choice	Angle
drama	90 degrees
action	160 degrees
cartoon	30 degrees
horror	80 degrees

6 people chose cartoon.

(a) Work out how many people were asked altogether.

(b) Work out how many people chose horror.

(Total for Question 5 is 4 marks)

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6 A population pyramid for County D shows the number of males (left) and females (right) in each age group.

Age group	Males	Females
0 to 19	410	460
20 to 39	350	140
40 to 59	500	190
60 and over	340	480

(a) Find the total number of males and the total number of females.

(b) Write the ratio males : females in its simplest form.

(Total for Question 6 is 3 marks)

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7 A population pyramid for Village C shows the number of males (left) and females (right) in each age group.

Age group	Males	Females
0 to 19	560	330
20 to 39	450	270
40 to 59	390	470
60 and over	250	140

(a) Work out the total population of Village C.

(b) How many more females than males are aged 40 to 59? (Write the difference, with a negative sign if there are fewer females.)

(Total for Question 7 is 4 marks)

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8 45 people were asked about pets owned by families. The results are in the table.

Choice	Frequency
rabbit	8
bird	17
dog	11
cat	7
fish	2

A pie chart is to be drawn. Work out the angle for each choice. Show that the angles add up to 360 degrees.

(Total for Question 8 is 4 marks)

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Mark scheme · 2.19 Population Pyramids: 30-minute Pack

Question 1

850 cao	**B1**
850 / 3010 x 100	**M1**
28.2% cao	**A1**

Answer: (a) 850; (b) 28.2%

Question 2

144 / 360 x 100	**M1**
40%	**A1**
72 / 144 x 12	**M1**
6 cao	**A1**

Answer: (a) 40%; (b) 6

Question 3

adds all eight values	**M1**
2910 cao	**A1**
female minus male for the age group	**M1**
350 cao	**A1**

Answer: (a) 2910; (b) 350

Question 4

adds all eight values	**M1**
2930 cao	**A1**
female minus male for the age group	**M1**
50 cao	**A1**

Answer: (a) 2930; (b) 50

Question 5

6 / 30 or 360 / 30 x 6	**M1**
72 cao	**A1**
80 x 72 / 360	**M1**
16 cao	**A1**

Answer: (a) 72; (b) 16

Question 6

males 1600, females 1270	**B1**
divides by a common factor	**M1**
160 : 127 cao	**A1**

Answer: (a) 1600, 1270; (b) 160 : 127

Question 7

adds all eight values	**M1**
2860 cao	**A1**
female minus male for the age group	**M1**
80 cao	**A1**

Answer: (a) 2860; (b) 80

Question 8

360 / 45 = 8 degrees per person	**M1**
at least 3 angles correct	**A1**
all angles 64, 136, 88, 56, 16 cao	**A1**
angles sum to 360	**B1**

Answer: 64, 136, 88, 56, 16

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