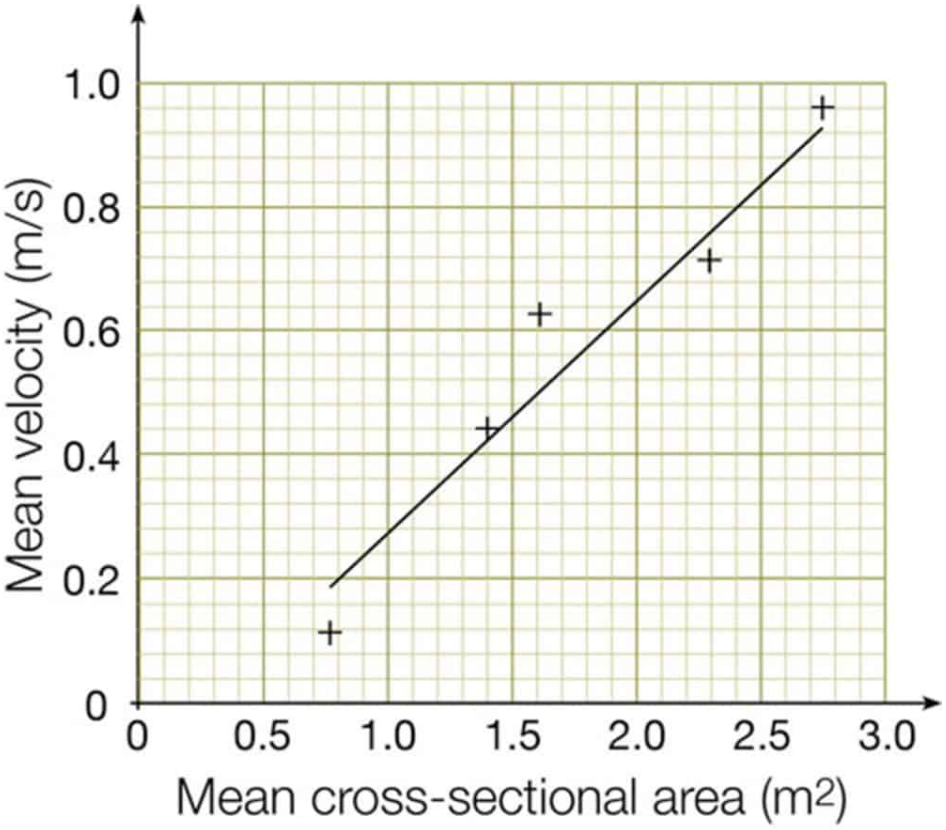
PAPER 3 FIELDWORK THEY PRESENT, USUALLY QUESTION 4

As I say paper 3 is probably the hardest to predict, so learn everything!!!!!!!
But here goes :-

SCATTER GRAPH to show relationship / correlation between the independent variable (X axis) and the dependent variable, the one being controlled (Y axis)
Plotting points on it, drawing a line of best fit, saying what the relationship is (positive or negative, and what that means), how strong the relationship is, explaining the relationship, highlighting any anomalies and trying to explain them. Eg:-



Notice, an increase in the area of the cross section of a river causes the mean velocity to increase, due to a reduction in friction.

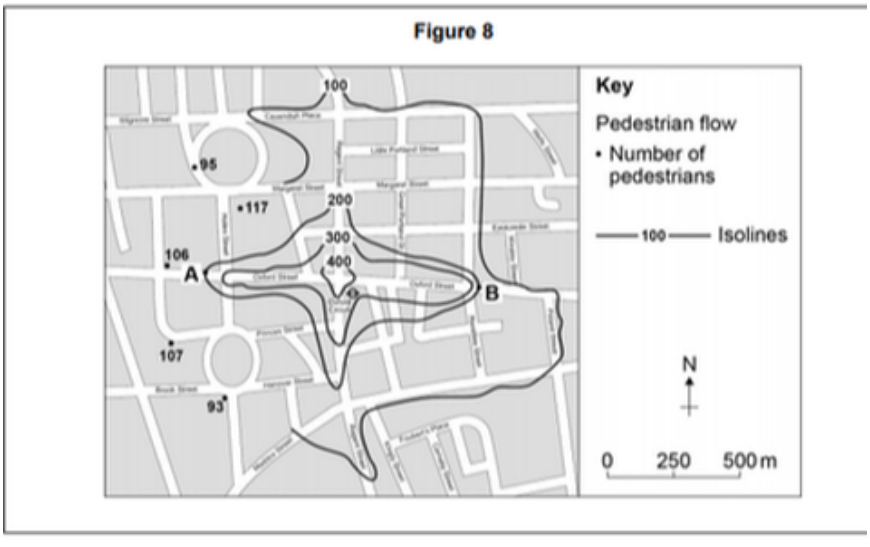
This is a strong positive relationship / correlation.

The best fit line illustrates the relationship, notice it does not go beyond the two ends of the data.

You can interpolate a probable value of the velocity given a cross section area using the best fit line. 2 m2 would give a velocity of approx 6.4 m/s.

A possible anomaly, but not very anomalous is 1.6 m2 and 6.4 m/s (a little too high) A bigger anomaly would be further from the line.

ISOLINE MAP to show patterns and gradients from point values. You may be asked to complete the isoline maybe interpolating a line between points at the correct places. The lines will show a pattern that you may interpret, where does it show high (whatever it is) what direction does it reduce, and how quickly based on the spacing of the lines (like contours). Eg:-

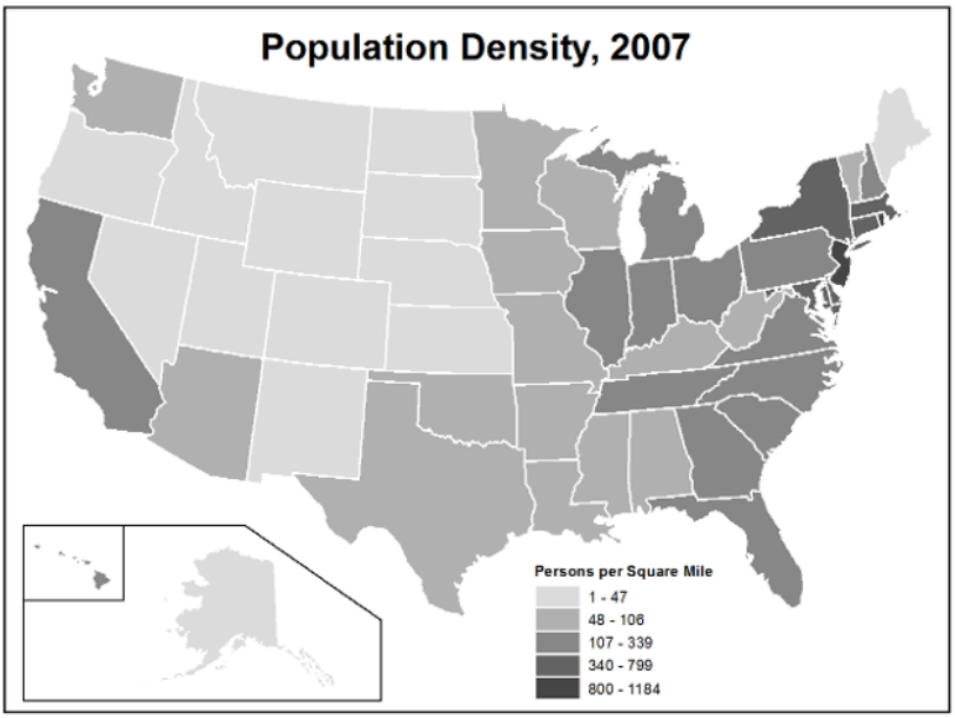


This map shows pedestrian flows in a town, see where they are high and where the flows decrease

The 100 pedestrian line can be completed by interpolating exactly between the points, ie closer to 95 than 117.

Like contours the spacing of the lines shows the speed of the increase of decrease. Close together a rapid change over a short distance, wide apart a slow change.

A DENSITY SHADING or choropleth map uses existing boundaries such as the borders of countries, or states as in the map of the USA below, or counties in the UK, or ward boundaries in a UK town. The value for the area is plotted as a shade or colour with a lighter shade for less and a darker shade for more. Each shade represents a range of values, usually regular scale such as 1-10, 11-20, 21-30 etc. If the range of values is very large as in population densities ninth USA a geometric scale might be needed eg 1-10, 11-30, 31-60, 61-100. Notice how values change instantly at the borders, which may not happen in reality.

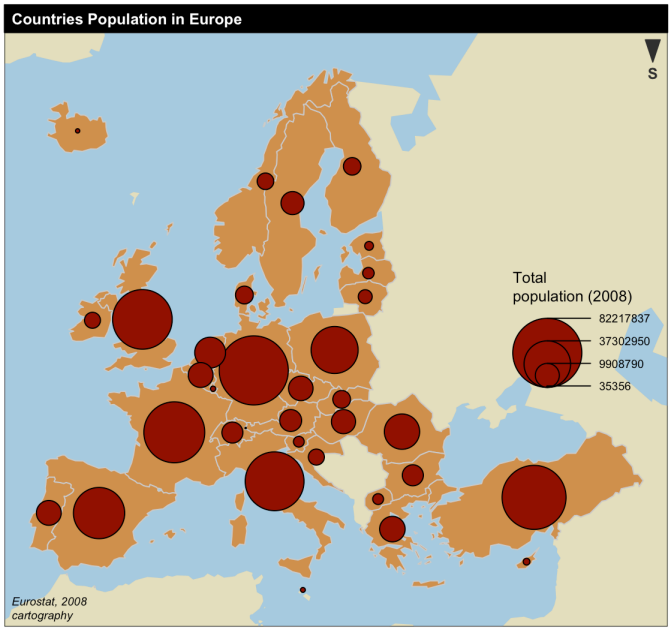


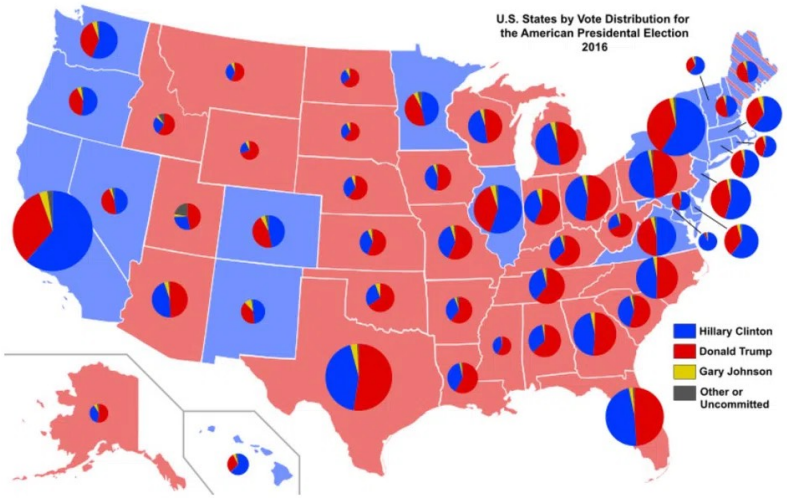
The density shading map is very good at showing how values change between administrative zones across an area.

You may be asked to complete the map by filling in an area. For instance on the USA map, if there was another state with a population density of 1000 persons per square mile it would be shaded with the darkest shade.

Instead of shading in a monotone, a colour type could be used, as long as it gets darker, eg yellow, orange, red, purple. Or line shading could be used as long as the lines got closer together to indicate more (see past papers).

PROPORTIONAL SYMBOLS can be located on a map to show the amount of an item at a particular place. These may be proportional circles where the size of the circle (actually the area of the circle) indicates the amount at that point or place, but sometimes a symbol is drawn to indicate the item, such as an oil drum for oil volumes, a cow for he number of cattle found in particular area, again the size of these symbols indicates the amount. It is also possible with proportional circles to make them into pie charts, for instance proportional circles showing numbers of people may be divided as pie charts according to the type of jobs they do.





A photograph hasn't appeared for some time. You may be asked what fieldwork data collection could take place in the area shown by the photo, what ideas you would be testing, how you would collect the data and why in the way you suggest, what problems you may encounter, and what risks may be involved.

Think about what human and physical fieldwork investigations you could do here. Try to think of two of each.

What would your aims and hypotheses be?

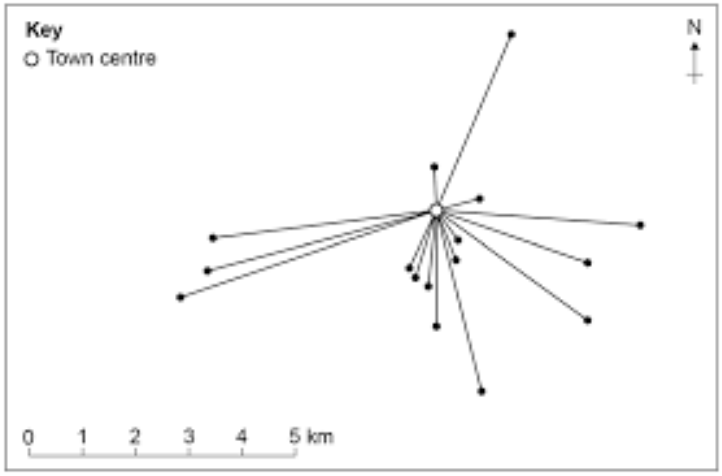
What data would you collect, how would you do it and why?

What secondary data collection may help?

Briefly outline any risks involved and how you would overcome them.

Think about the above ideas and questions for this image as well.

DESIRE LINE MAPS can be drawn to show the movement of people. For instance from their homes to a particular holiday destination. Straight lines are drawn to show the movements. It could also be done to show how far shoppers travel to the town centre of a given urban area. The map will show the distances they travel, from what directions most travel and any direction from which fewer people travel. This may need explaining.

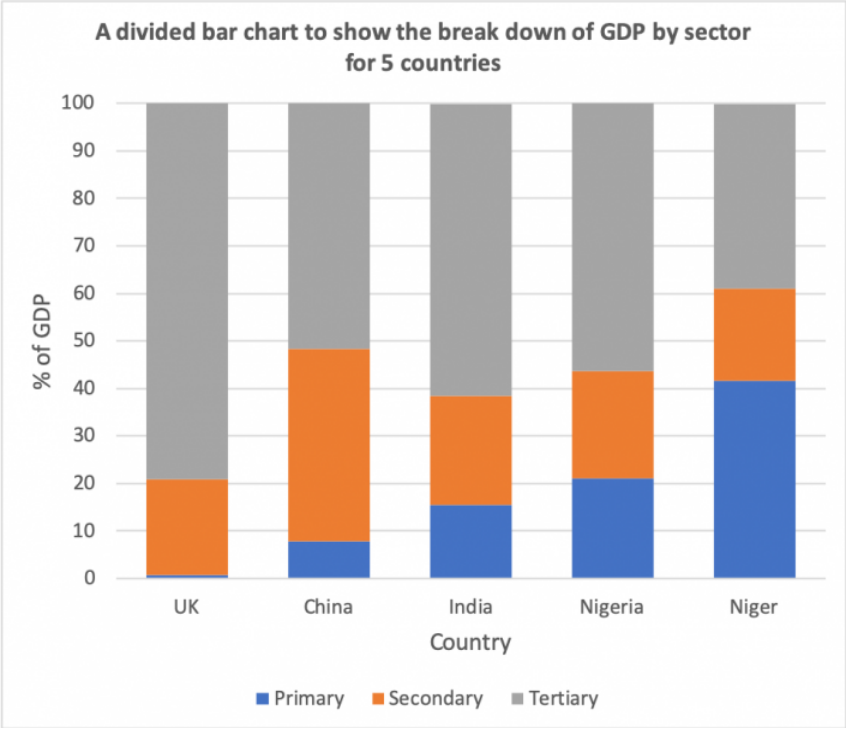


Here you could be asked to add a desire line. For instance for a shopper who travels 4 km from the south west. See if you can do this.

which general direction do fewest people travel from? Seems to be the north.

Could you explain this? Maybe there is an out of town retail centre to the north which draws shoppers from the north of the town. Perhaps there is a river to the north of the centre with few bridges and this deters shoppers.

DIVIDED OR STACKED BAR CHARTS and are divided according to the relative amounts of any categories. This may be done by percentages which is good for comparisons, or by total amounts which may mean bars will be of different heights. The bars can be drawn horizontally, and they may even located on a map.



The divided bar charts here show the % of gross domestic product (GDP) by each of the 3 main sectors, primary, secondary and tertiary.

You may b asked to complete a bar chart.

You may be asked to read info from a bar chart. For instance the figures for Niger are Primary 40%, Secondary 20% and Tertiary 40%.

You may be asked to compare charts.

Data presented on a dispersion diagram (or box and whisker) or as figures may allow you to calculate the central value, mean (average), mode or median. And/or you maybe asked to say something about the spread of the data, the range or interquartile range (difference between the upper quartile and the lower quartile)

A: 1, 1, 8, 8, 8, 10

B: 1, 3, 6, 8, 12, 12

	mean	median	mode	range
A	6	8	8	9
B	7	7	12	11

Look at the two data sets A and B on the left.
CENTRAL VALUES
Mean/average, add up figs divide by total (6).

Median, the middle value when they are put in order from lowest highest.

Mode, the most frequently occurring value.

SPREAD
Range, from highest to lowest (but this may be affected by extreme values).

Inter Quartile Range, ignores the extreme values. Set A, Median is 8, this divides the data in half. The middle of the bottom half of the data, the lower quartile, 1,1, 8 is 1. The middle of the top half, the upper quartile, 8, 8, 10, is 8, so the Inter Quartile Range is 8-1 = 7.

Do the same exercise for data set B.