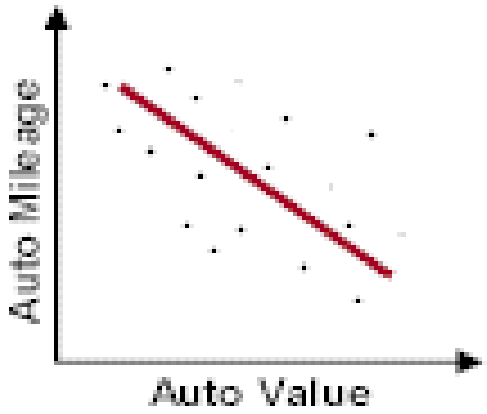
Data 1

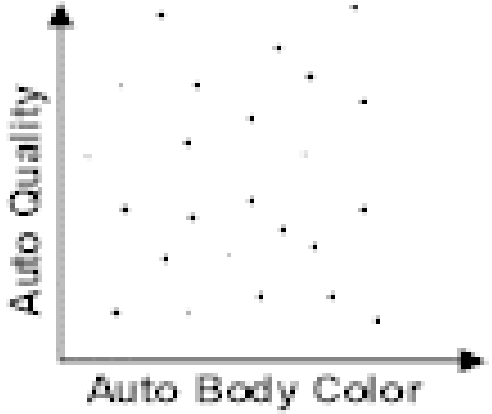
Flip

A) Describe the ***correlations*** on these scatter graphs

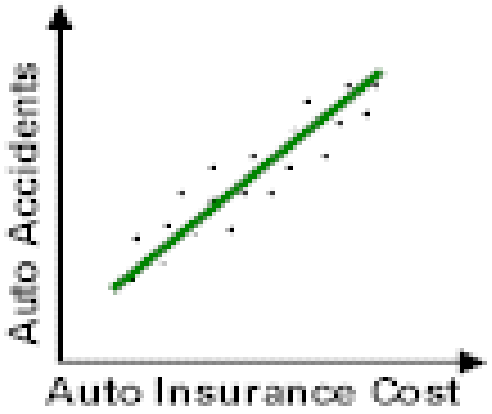
B) Describe the ***relationships*** shown on these scatter graphs



(1)



(2)



(3)

Previous

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Flip

How do you work out the:

Mean
Median
Mode
Range

Flip

a) How do you work out the mean of a grouped frequency table?

Temperature (T °C)	Frequency
$8 < T \leq 12$	6
$12 < T \leq 16$	8
$16 < T \leq 20$	13
$20 < T \leq 24$	21
$24 < T \leq 28$	2

b) What is the modal class interval?

Flip

What is this graph called? What do you need to remember about it?

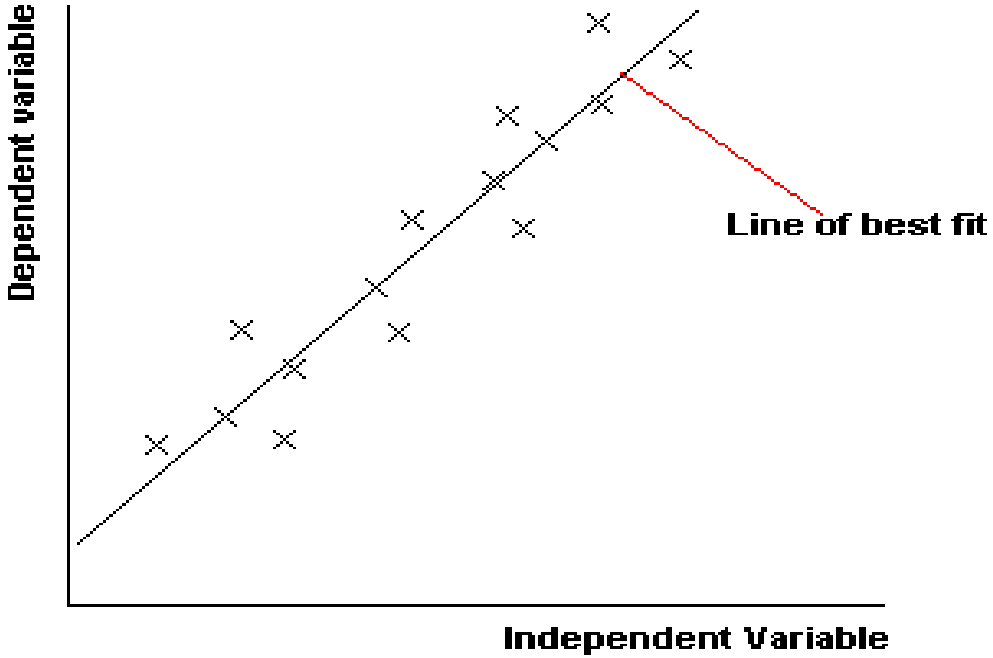
1	9
2	2 5 6 7 8 9
3	0 4 6 7
4	2 3 4 6 8 8 9
5	2 3 5 7 8
6	2

Previous

Next

Flip

What is this graph called and what do you need to remember about it?



Flip

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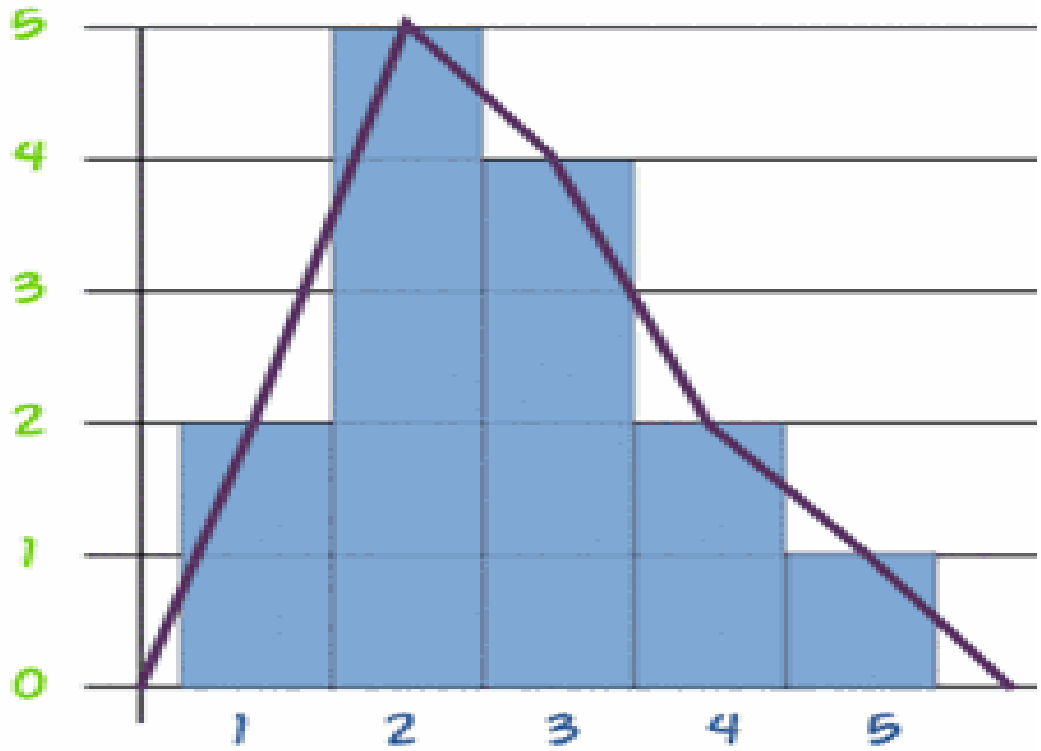

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Flip

If the probability if getting a C is $\frac{19}{20}$, what is the probability of not getting a C?

Flip

If P(A) = 0.3 and P(B) = 0.5, what is
(a)P(A OR B)
(b)P(A AND B)

Flip

What is a data collection sheet?

Flip

What is likely to be wrong with a question in a survey?

Write a better question to be used

Flip

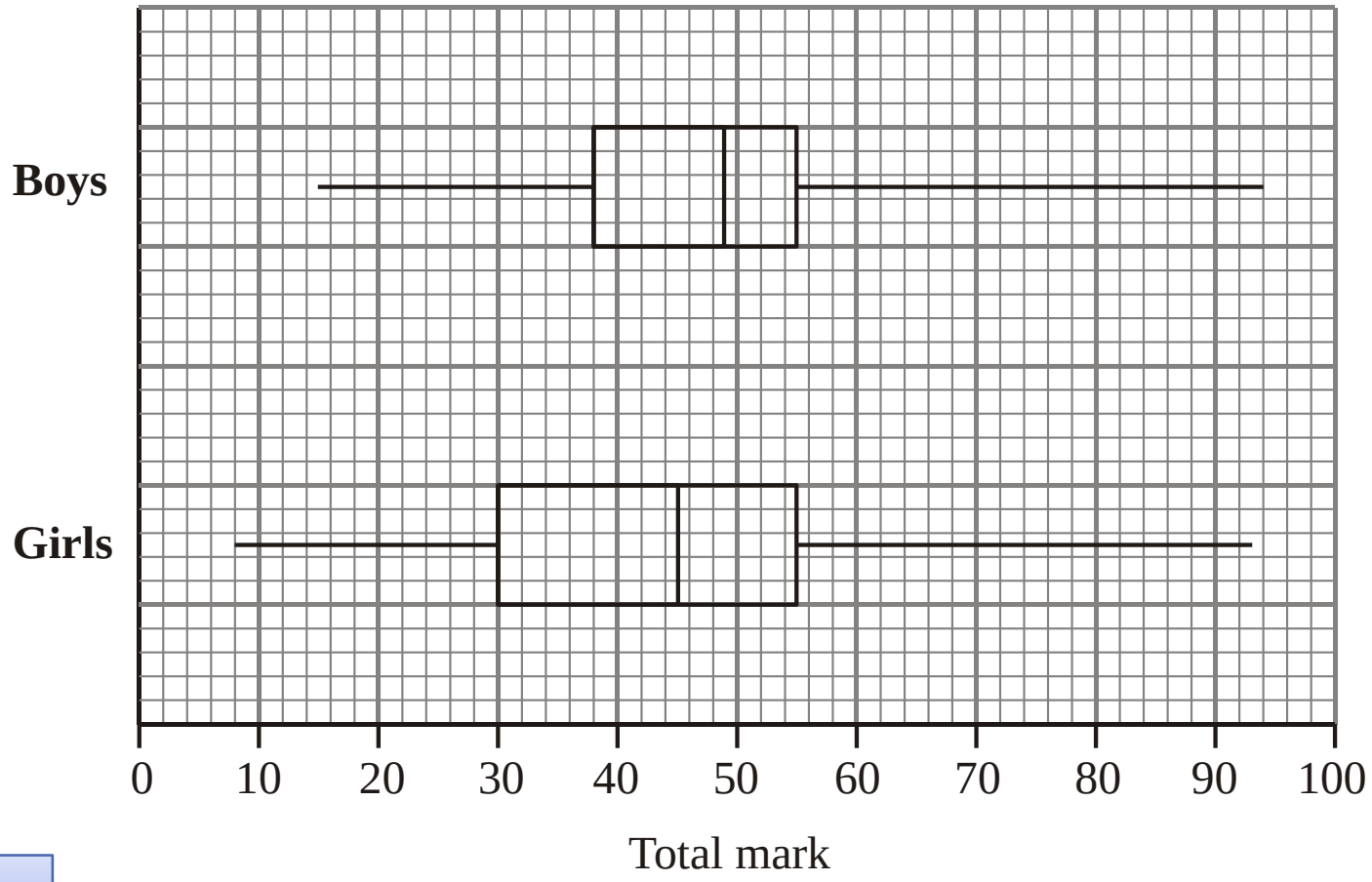
a) What is a Random sample?
How would you chose a random sample of 5 students from a form?

b) If Alison wants a Stratified sample of 150 students by age and gender, how many Year 10 girls should she chose?

	Male	Female
Year 7	126	109
Year 8	112	134
Year 9	121	114
Year 10	87	94
Year 11	88	80

Flip

Compare the results of the boys and the girls in an English test



Flip

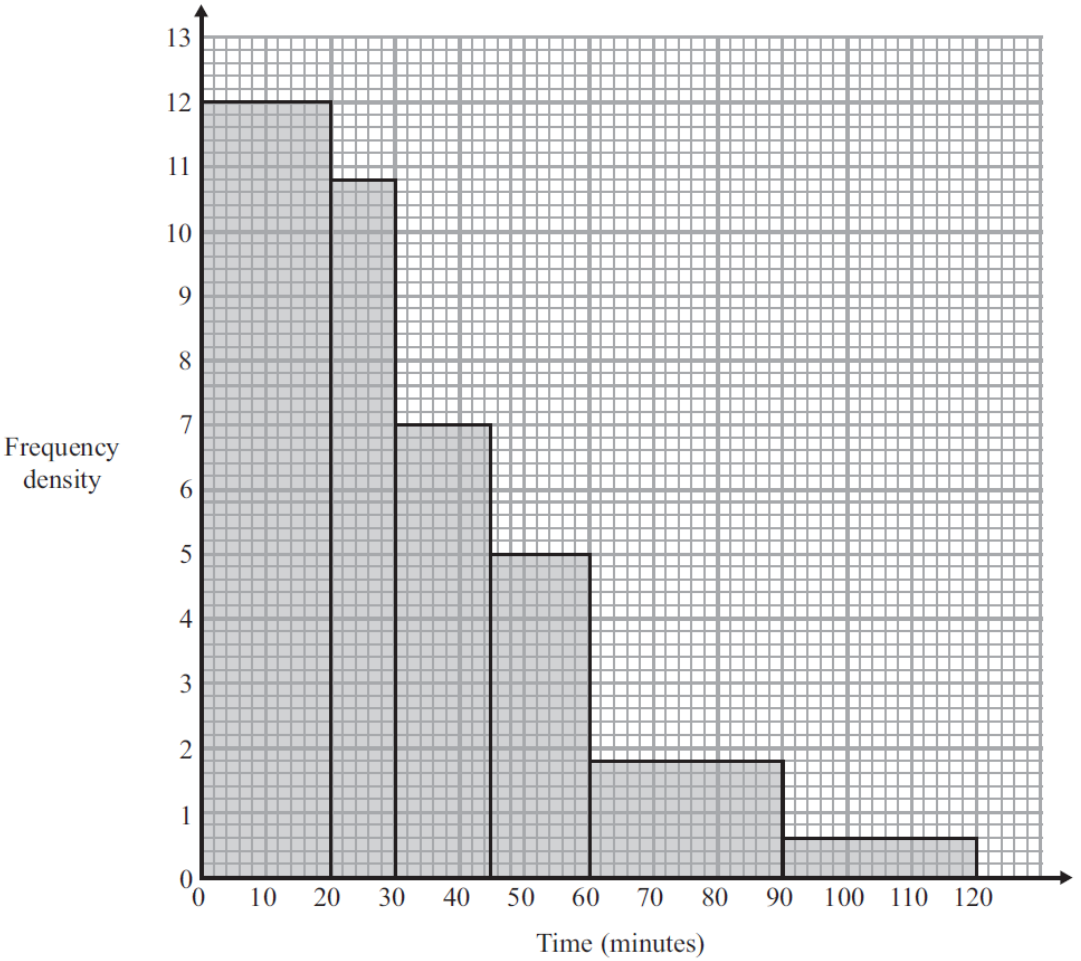
What do you need to remember when drawing a cumulative frequency curve?

How would you then find the median?

Flip

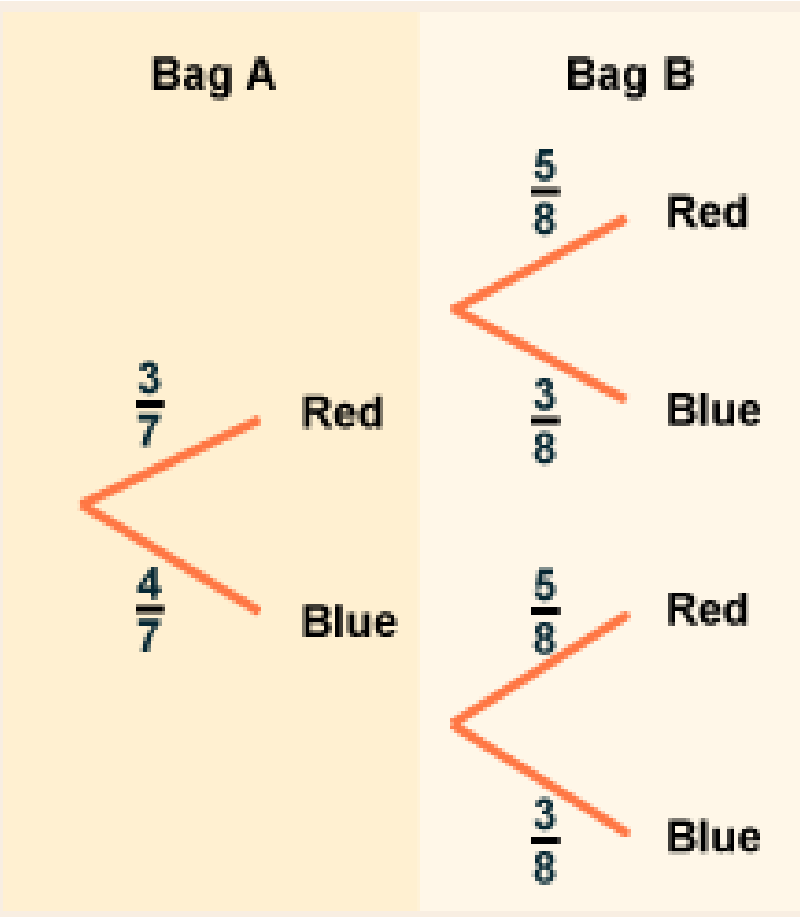
What do you need to remember about histograms?

How many people took between 60 and 90 minutes?



Flip

What do you need to know about tree diagrams?



E.g. P(Red, Blue)

E.g. P(Same colour)

Previous

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3 red, 2 blue and 4 green counters are in a bag. Two are picked without replacement.

What is the probability they the same colour?

What is the probability they are different colours?

Data 17

Flip

Create your own!

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Answer 1

a) Correlation

1. Negative correlation
2. No correlation
3. Positive correlation

b) Relationship

1. As mileage decrease auto value decreases
2. No relationship between auto quality and colour
3. As the number of accidents goes up, the insurance costs rise.

Answer 2

Mean = add and divide

Median = put them in order, then find the middle
(if 2 middle ones, half way between them)

Mode = most frequent

Range = biggest - smallest

Answer 3

a) Multiple the midpoint of each class interval by the frequency (eg 10 x 6) Add up these values
Add up all the frequencies

$$\text{Mean} = \frac{\text{Total } (f \times x)}{\text{Total } f}$$

b) $20 < T \leq 24$

Answer 4

STEM AND LEAF

Always write the leaf in number order

Don’t forget to include a key!

Answer 5

A SCATTER GRAPH

Remember to draw a line of best fit through the middle of the points.
Do NOT join the points together.

Answer 6

A FREQUENCY POLYGON

Draw a bar chart and then draw a straight line to join the middle of the bars.

Answer 7

$$1 - \frac{19}{20} = \frac{1}{20}$$

Answer 8

(A)0.3 + 0.5 = 0.8

(B)0.3 x 0.5 = 0.15

Answer 9

Table with 3 column:

- one giving at least 4 possible answers
- one for a tally
- one for totals (or frequency)

Answer 10

a) No time frame
b) Boxes overlap
c) No box for some value

Rewrite the same question but make sure you do include a time frame and at least four non-overlapping boxes that cover all options

Answer 11

a) Each person has an equal chance of being chosen - Put all the names in a hat and draw out five.

b) $126 + 109 + 112 + \ldots = 1065$ students in total

$\frac{94}{1065}$ of the students are year 10 female

$\frac{94}{1065} \times 150 = 13.2$

She needs 13 year 10 female students

Answer 12

Usually 2 comparisons required:

1) Say something about a **value**
i.e. The median mark for the boys is nearly 50, higher than the median mark for the girls which is 45.

2) Say something about the **range** or interquartile range
i.e. The range for the girls is 85 which is more than the range for the boys which is only 79

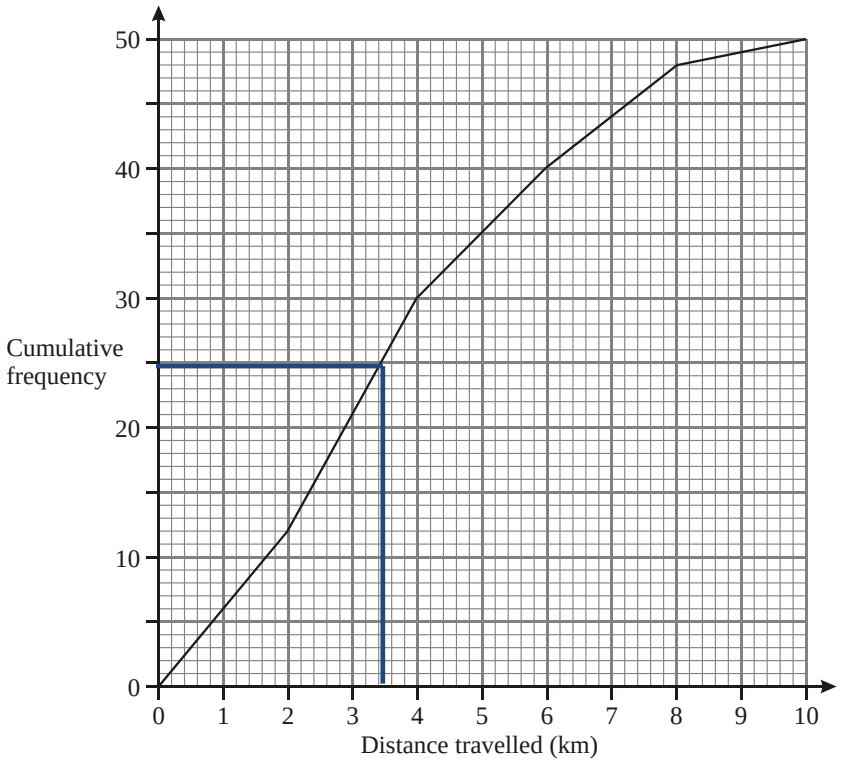
Answer 13

Remember **add up** frequencies to find the cumulative frequencies.

Plot the cumulative frequencies at the **end point** of each interval

Join with **smooth curve** which goes through all the points

To find the median draw a line across from half way up y-values until it meets the curve then follow it down to x-axis to find value



Answer 14

Histograms look like bar charts but they are different –

- Bars can be different widths
- Frequency density goes up y-axis.

Remember **frequency = area**

i.e. frequency = class width x freq density

30 x 1.8 = 54 people took between 60 and 90 minutes

Answer 15

Multiply as you go across

$$P(R,R) = \frac{3}{7} \times \frac{5}{8} = \frac{15}{56}$$

$$P(B,B) = \frac{4}{7} \times \frac{3}{8} = \frac{12}{56}$$

Add as you go up or down

$$P(same) = \frac{15}{56} + \frac{12}{56} = \frac{27}{56}$$

Answer 16

$$P(r,r) = \frac{3}{9} \times \frac{2}{8} = \frac{6}{72}$$

$$P(b,b) = \frac{2}{9} \times \frac{1}{8} = \frac{2}{72}$$

$$P(g,g) = \frac{4}{9} \times \frac{3}{8} = \frac{12}{72}$$

$$P(same) = \frac{20}{72} = \frac{5}{18}$$

$$\boldsymbol{P(different) = 1 - P(same)}$$

$$= \frac{13}{18}$$

Answer 17

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