

# Year 11 Mathematics Learning Journey: Unit 8 - Data and Probability

## Step 11: Probability equations

There are 4 red counters and  $x$  blue counters. 2 counters are removed from the bag at random. The probability that both the counters taken are blue is  $\frac{1}{3}$ . Work out the value of  $x$ .

## Step 10: Conditional probability

There are 8 counters in a bag. 5 of the counters are red. 3 of the counters are blue. Two counters are taken at random from the bag. Work out the probability that one counter of each colour are taken. You must show your working.

## Step 8: Probability from tables

In a class of 24 students, 12 students play the piano, 13 students play the guitar, and 4 students play neither instrument. A student is selected at random. Work out the probability that the student only plays the guitar.

## Step 5: Box plots

How many parts does a box plot split a distribution of data into?

## Step 6: Comparing distributions

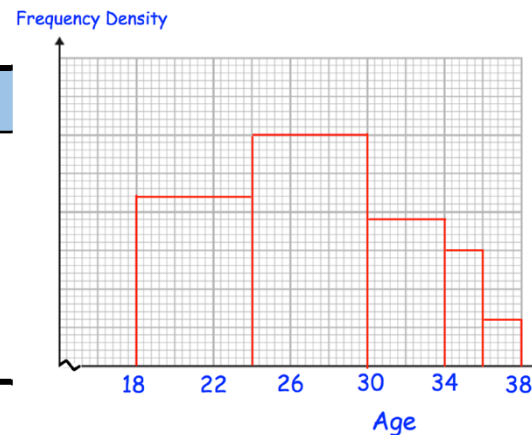
Why is just looking at the medians not enough to give us a full picture when comparing two data sets?

## Step 4: Cumulative frequency

Why is the value for the median only an estimate?

## Step 2: Histograms

The histogram below shows the ages of rugby players. There are 768 players that are under 26 years old. Work out an estimate of how many players are over 32.



## Step 1: Stratified sample

How can we ensure the stratified sample is random?

Achievement resilience

Community PERSEVERANCE Pride

**SHUTTLEWORTH**   
COLLEGE