



Every time a ball bounces, it rises to 80% of the previous height.  
The ball is dropped from 5 metres and it allows to bounce freely.

What is the smallest number of bounces until its rebound height is less than 50cm?

$$5 \times 0.8^{10} = 0.537m$$

$$5 \times 0.8^{11} = 0.429m$$

11 bounces

The youngest person on a flight is 8 years old.

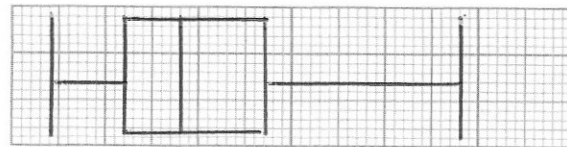
oldest 96

The upper quartile of the ages is 54.

The median is 36.

The range of the ages is 88 and the interquartile range is 30.

$$LQ = 24$$



Draw a box plot to show this information

Work out

$$\left(\frac{8}{27}\right)^{\frac{2}{3}}$$

$$\sqrt[3]{8} = 2$$

$$2^2 = 4$$

$$\sqrt[3]{27} = 3$$

$$3^2 = 9$$

$$\frac{4}{9}$$

Factorise  $7x^2 + 8x + 1$

$$(7x + 1)(x + 1)$$

Prove

$$(x + 2)(x - 3) \equiv (x - 2)(x + 1) - 4$$

$$x^2 + x - 2x - 2 - 4$$

$$x^2 - x - 6$$

$$(x + 2)(x - 3)$$

QED