



Find the size of angle ADB.

A rectangular field has:

length 120m, to the nearest 10m.
width 86m, to the nearest metre.

Calculate the upper bound for the perimeter of the field.

Darius has a biased 6 sided dice.

The probability of a 6 is 0.8 and the other five numbers have an equal probability.

Darius rolls the dice three times.

What is the probability that Darius rolls three sixes?

A ball is dropped from h metres.
After each bounce the ball reaches 80% of its previous height.
After its third bounce it reaches a height of 3.072m.

Find h

Given that

$$a : b = 9 : 4 \quad \text{and} \quad b : c = 7 : 3$$

Find the ratio $a : c$

Give your answer in its simplest form.