### 28th November

<table>
<thead>
<tr>
<th>Find the size of angle ADB.</th>
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<tbody>
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<td><img src="image" alt="Diagram" /></td>
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#### 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.

#### Roger has a biased 6 sided dice.
- The probability of a 6 is 0.8 and the other five numbers have an equal probability.
- Roger rolls the dice three times.

What is the probability that Roger 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
- \(a : b = 9 : 4\) and \(b : c = 7 : 3\)

Find the ratio \(a : c\)

Give your answer in its simplest form.