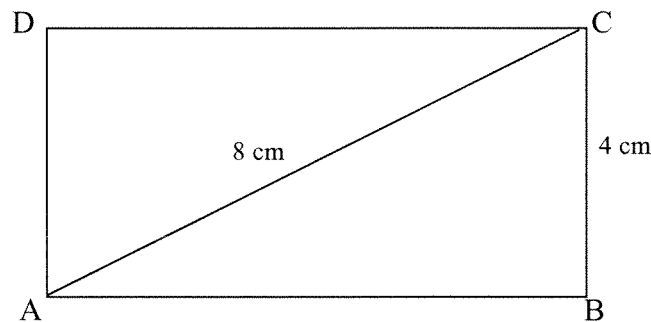
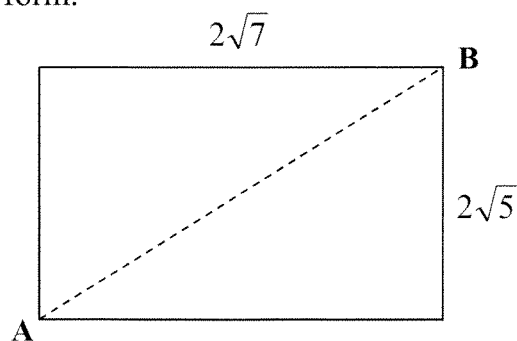


## SURDS

1. Simplify (a)  $\sqrt{147} - 5\sqrt{3}$  (b)  $\sqrt{2}(\sqrt{3} + \sqrt{2}) - \sqrt{6}$   
(2,2)
2. Express  $2\sqrt{5} + \sqrt{20} - \sqrt{45}$  as a surd in its simplest form.  
(2)
3. Express with a rational denominator  $\frac{5}{2\sqrt{3}}$   
(2)
4. Express as a fraction with a rational denominator  $\frac{5}{4 - \sqrt{3}}$   
(3)
5. In the rectangle ABCD, the diagonal AC is 8 cm and the height BC is 4 cm.



- (a) Calculate the length of the rectangle, giving your answer as a surd in its simplest form.  
(3)
  - (b) Calculate the area of triangle ABC.  
(2)
6. Find the length of the diagonal, AB, of this rectangle leaving your answer as a surd in its simplest form.



(4)

20 marks