

- 6 In 2018, a badminton club had 460 members.

Of these members,

- A were younger than 30
- B were aged between 30 and 60 inclusive
- C were older than 60

Given that $A : B : C = 2 : 5 : 3$

- (a) find the total number of members who were aged 30 or older in 2018 (2)

In 2018, the annual membership fee for each member who was older than 60 was \$65
The annual membership fee for each other member was \$135

- (b) Calculate the total amount, in \$, that the 460 members paid in annual membership fees in 2018 (2)

The annual membership fee for each member who was older than 60 in 2019 was 4% greater than the annual membership fee for each member who was older than 60 in 2018

- (c) Calculate the annual membership fee for each member who was older than 60 in 2019 (2)

The badminton club buys 12 shuttlecocks for a total cost of \$5.10
The club then sells the shuttlecocks to members for \$0.50 each.

- (d) Calculate the percentage profit, to 3 significant figures, made by the club on each shuttlecock that was sold. (2)

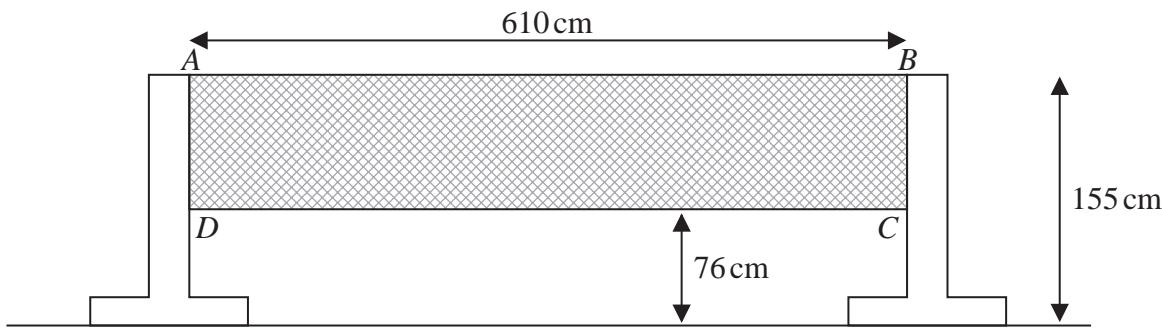


Figure 2

Figure 2 shows a badminton net $ABCD$ and two supports for the net.
The badminton net is shaded in the diagram.

Figure 2 gives information about the dimensions of the badminton net.
Each measurement is given to the nearest cm.

- (e) Calculate the upper bound, in cm^2 , of the area of the net $ABCD$ (3)

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(Total for Question 6 is 11 marks)



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