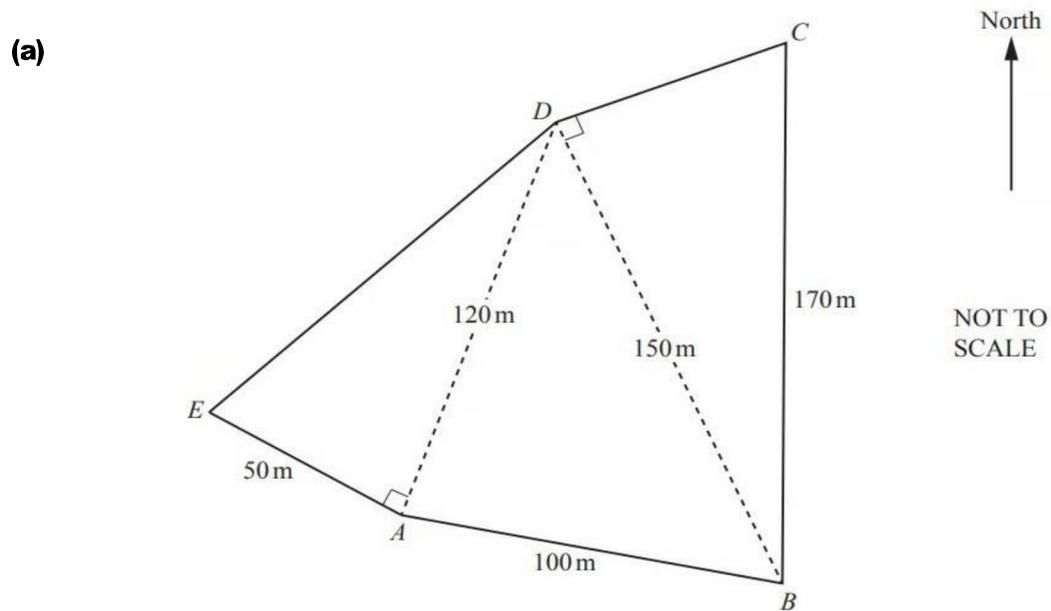


THE AMBASSADORS COLLEGE, OTA

MATHEMATICS DEPARTMENT



SSS2 REGULAR MATHEMATICS HOLIDAY ASSIGNMENT



The diagram shows a field $ABCDE$. Calculate the perimeter of the field $ABCDE$.

(4 marks)

(b) Calculate angle ABD .

(4 marks)

(c) i) Calculate angle CBD .

[2]

ii) The point C is due north of the point B . Find the bearing of D from B .

[2]

(4 marks)

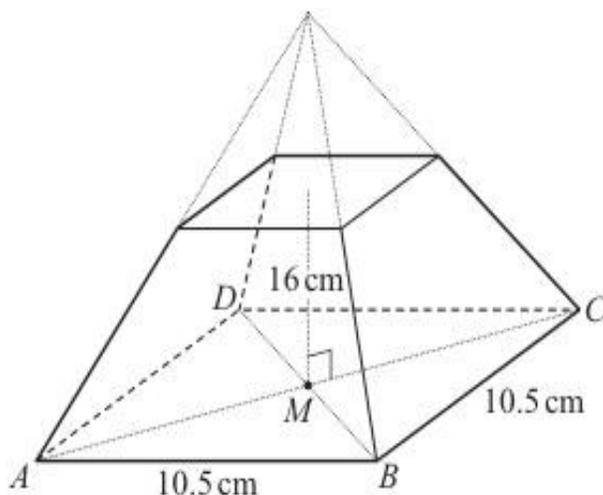
(d) Calculate the area of the field $ABCDE$.

Give your answer in hectares. [1 hectare = 10 000m²]

(4 marks)

SSS2 HONOURS MATH HOLIDAY ASSIGNMENT

1



NOT TO SCALE

The diagram shows a frustum of the pyramid $OABCD$.
The height of the frustum is 16 cm.

Calculate the volume of the frustum.

2a

- 15 The height of each of 140 basketball players is recorded.
The table shows the results.

Height (h cm)	$160 < h \leq 180$	$180 < h \leq 185$	$185 < h \leq 190$	$190 < h \leq 200$	$200 < h \leq 210$
Frequency	7	12	31	70	20

- (a) Calculate an estimate of the mean height.
(b) Two of the players are chosen at random.

Find the probability that both players have a height greater than 190 cm and no more than 200 cm.

SSS2 FURTHER MATH HOLIDAY ASSIGNMENT

- (a) Write $\log_{27} x$ as a logarithm to base 3.
(b) Given that $\log_a y = 3(\log_a 15 - \log_a 3) + 1$, express y in terms of a .
- Solve the following equations to find p and q .

$$8^{q-1} \times 2^{2p+1} = 4^7$$

$$9^{p-4} \times 3^q = 81$$