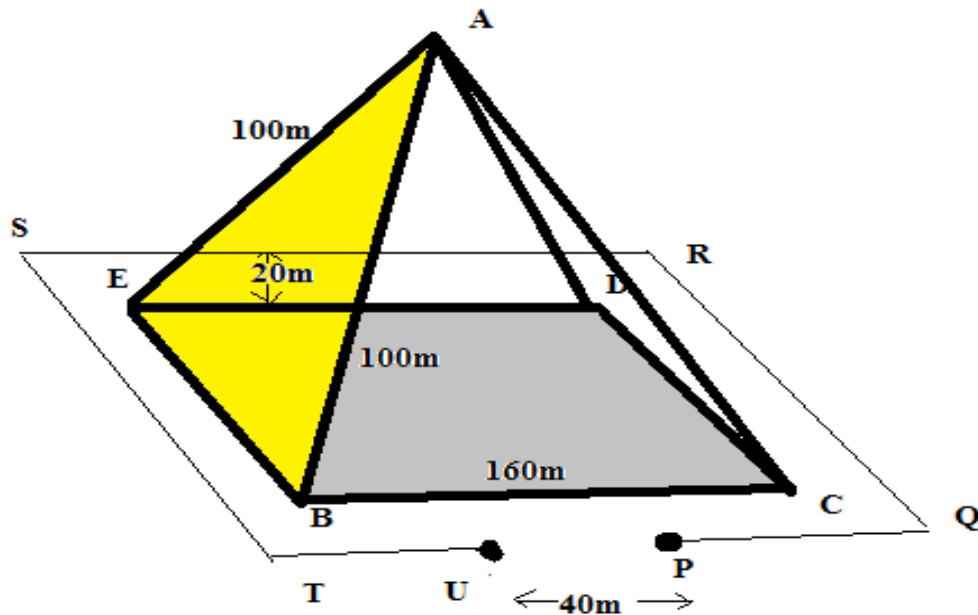


Test item 1: Herons formula

Domain: Mathematical Literacy	Topic/Chapter: Herons formula	Class(es): IX Expected time:12 min Total Credit:8
Description of Item: Text and image	Learning Outcomes: To make students to apply the Herons formula in daily life situations.	

To promote the meditation & yoga, Govt. of a state builds a meditation centre in shape of a pyramid with square base as shown in figure. The dimensions of triangular faces are 100m, 100m and 160m. A railing is made 20 m apart from base around all the sides except 40m entry way at front. The cost of sheets used for triangular panel Rs.1500 per sq m.



- (i) The length of railing is (a) 760m (b) 640m (c)400m (d)480m.
(ii) The surface area of triangular sheet of one side is _____
(iii) The total cost of sheets used to build the centre is _____
(iv) To generate the revenue, Govt decided to charge entry fee and per ticket allocates the area 4mX4m, find the no. of tickets sold at a time.

Question intent

FRAMEWORK	CHARACTERISTICS
Competency Cluster	<i>Connections</i>
Overarching Idea	<i>Space and shape</i>
Context	<i>occupational</i>
Item format	(i) <i>Simple MCQ</i> (ii) <i>Closed constructed response items</i> (iii) <i>Closed constructed response items</i> (iv) <i>Closed constructed response items</i>
Cognitive Process	<i>Interpreting, Problem solving</i>
Proficiency Level	(i) 2 (ii) 3 (iii)4 (iv)4

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Description of Answer keys and credit:

(i)Full Credit- For (a) No Credit- For other response (ii)Full Credit- 4800 sq m Partial credit – using correct formula but putting incorrect value. No Credit- For other response (iii)Full Credit- Rs.28800000 No Credit-For other response (iv) Full Credit- No. of tickets= $160m \times 160m \div 4m \times 4m = 1600$ No Credit- For other response

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