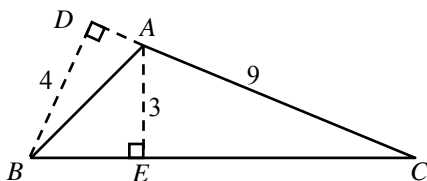


TB(1B) Ch. 8 Areas and Volumes (I)

Multiple Choice Questions

1. [13-14 Standardized Test 2 Q3]

In the figure, $AC = 9$, $BD = 4$ and $AE = 3$. Find the length of BC .



- A. 6.75 B. 10
 C. 12 D. 24

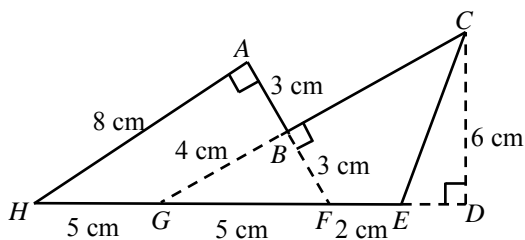
2. [13-14 Standardized Test 2 Q8]

A cube of side length 9 cm is melted and recast into x small cubes of volume 27 cm^3 . What is the value of x ?

- A. 3 B. 9
 C. 27 D. 243

3. [13-14 Final Exam]

In the figure, ABF , CBG and $HGFED$ are straight lines. Find the area of polygon $ABCEH$.



- A. 33 cm^2 B. 39 cm^2
 C. 45 cm^2 D. 78 cm^2

4. [13-14 Final Exam]

The total surface area of a cuboid with a square base is 1600 cm^2 . Its total area of all lateral faces is two times of its base area. Find the volume of the cuboid.

- A. 4000 cm^3 B. 4800 cm^3
 C. 6000 cm^3 D. 8000 cm^3

5. [14-15 Mid-Year Exam #10]

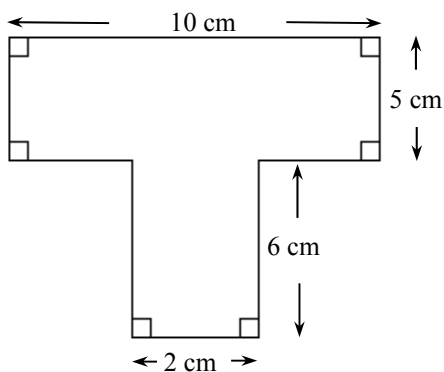
Five marbles, each of volume 20 cm^3 , are put into a tank that is filled with some water. The marbles are totally submerged and no water overflows. If the base area of the tank is 200 cm^2 , find the rise in water level.

- A. 0.1 cm
- B. 0.5 cm
- C. 2 cm
- D. 10 cm

6. [14-15 Mid-Year Exam #19]

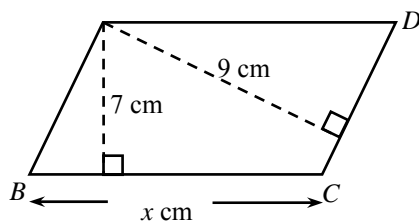
The figure shows the base of a prism. It is given that the height of the prism is 3 cm. Which of the following about the prism is wrong?

- A. Base area is 62 cm^2 .
- B. The volume is 186 cm^3 .
- C. The perimeter of the base is 42 cm.
- D. The total surface area of the prism is 188 cm^2 .



7. [14-15 Mid-Year Exam #20]

In the figure, $ABCD$ is a parallelogram. If the perimeter of the parallelogram is 48 cm, find the value of x .

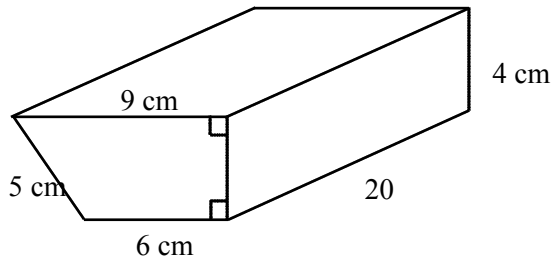


- A. 10.5
- B. 11.5
- C. 12.5
- D. 13.5

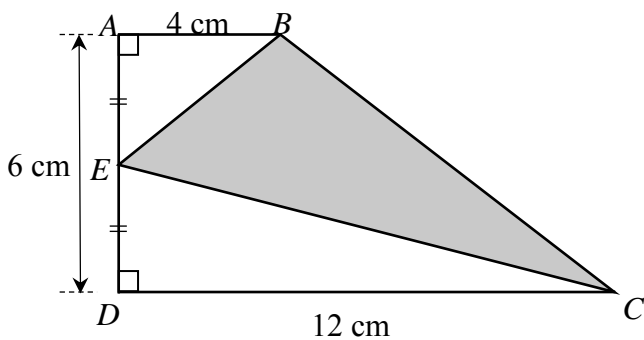
8. [14-15 Final Exam #9]

Find the total surface area of the following prism.

- A. 480 cm^2
- B. 510 cm^2
- C. 540 cm^2
- D. 600 cm^2



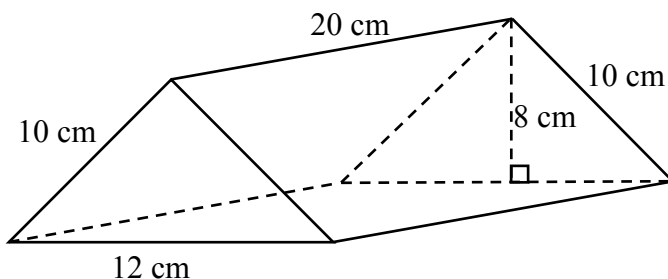
9. [15-16 Mid-Year Exam #8]



In the figure, $ABCD$ is a right-angled trapezium with $AB = 4 \text{ cm}$, $DC = 12 \text{ cm}$ and height 6 cm . E is the mid-point of AD . Find the area of $\triangle EBC$.

- A. 18 cm^2
- B. 24 cm^2
- C. 30 cm^2
- D. 36 cm^2

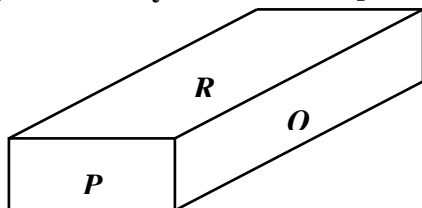
10. [15-16 Mid-Year Exam #9]



The figure shows a right triangular prism. Find its total surface area.

- A. 640 cm^2
- B. 736 cm^2
- C. 820 cm^2
- D. 960 cm^2

11. [15-16 Mid-year Exam #20]



In the figure, the areas of the surfaces P , Q and R of the cuboid are 6 cm^2 , 10 cm^2 and 15 cm^2 respectively. Find the volume of the cuboid.

- A. 30 cm^3
- B. 62 cm^3
- C. 300 cm^3
- D. 900 cm^3

12. [15-16 Final Exam, #16]

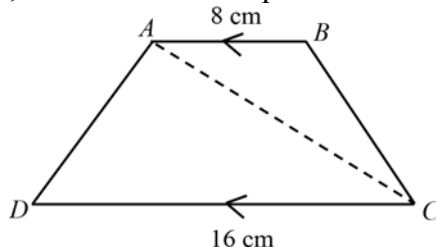
If the side of a cube is decreased by 10%, which of the following statements are true?

- I. The perimeter of the base decreases by 10%.
- II. The area of all lateral faces decreases by 20%.
- III. The percentage change in volume is -27.1% .

- A. I and II only
- B. I and III only
- C. II and III only
- D. I, II and III

13. [16-17 Mid-year Exam, #9]

If the area of $\triangle ABC$ is 40 cm^2 , find the area of trapezium $ABCD$.

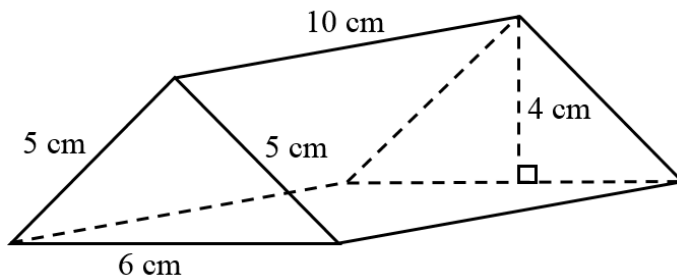


- A. 60 cm^2
- B. 120 cm^2
- C. 160 cm^2
- D. 240 cm^2

14. [16-17 Mid-year Exam, #10]

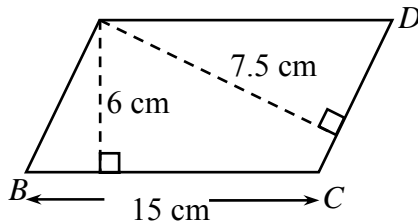
The figure shows a triangular prism. Find its volume.

- A. 120 cm^3
- B. 125 cm^3
- C. 240 cm^3
- D. 250 cm^3



15. [16-17 Mid-year Exam, #20]

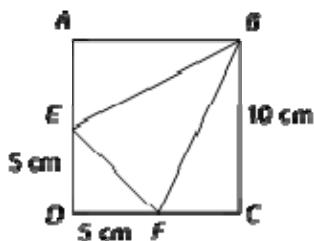
In the figure, $ABCD$ is a parallelogram.
Find the perimeter of $ABCD$.



- A. 12 cm
- B. 27 cm
- C. 54 cm
- D. 90 cm

16. [16-17 Final Exam, #6]

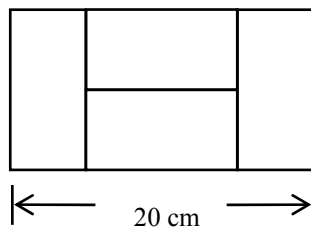
The figure shows a square $ABCD$ of side 10 cm. If $ED = 5$ cm and $DF = 5$ cm, find the area of $\triangle BEF$.



- A. 37.5 cm^2
- B. 62.5 cm^2
- C. 87.5 cm^2
- D. 100 cm^2

17. [16-17 Final Exam, #14]

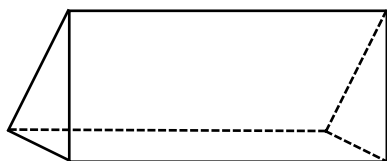
Peter uses four pieces of identical rectangular wood to make a bigger rectangle as shown in the figure. Find the area of a piece of wood.



- A. 20 cm^2
- B. 50 cm^2
- C. 100 cm^2
- D. 200 cm^2

18. [17-18 Mid-year Exam, #19]

The figure shows a triangular prism. Which of the following statements are correct?

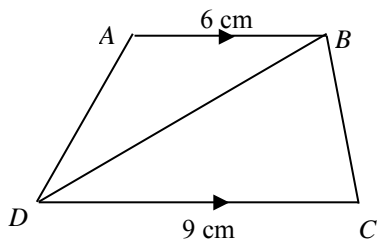


- I. The prism has 5 faces, 6 vertices and 9 edges.
- II. The prism has uniform cross-section.
- III. The prism is not enclosed by polygons only.

- A. I and II only
- B. I and III only
- C. II and III only
- D. I, II and III

19. [17-18 Standardized Test 2 Q3]

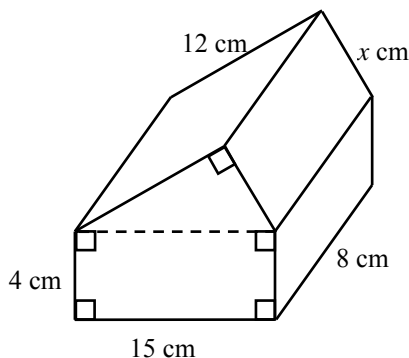
In the figure, the area of trapezium $ABCD$ is 120 cm^2 . The area of $\triangle BCD$ is



- A. 144 cm^2 .
- B. 72 cm^2 .
- C. 48 cm^2 .
- D. 36 cm^2 .

20. [17-18 Standardized Test 2 Q7]

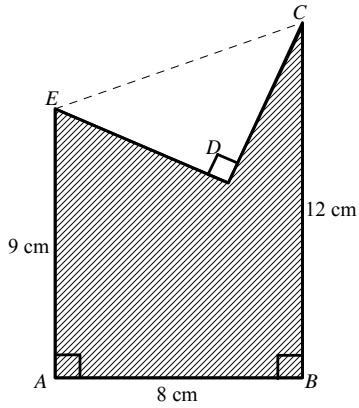
In the figure, the volume of the prism is 912 cm^3 . Find the total area of all lateral faces of the prism.



- A. 316 cm^2
- B. 352 cm^2
- C. 490 cm^2
- D. 580 cm^2

21. [17-18 Final Exam Q15]

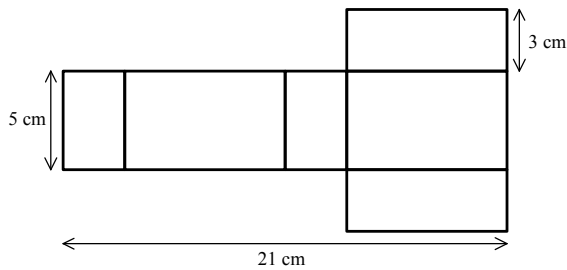
In the figure, if $CD = DE$ and the perimeter of the pentagon $ABCDE$ is 41 cm, the area of the shaded region is



- A. 48 cm^2 .
- B. 66 cm^2 .
- C. 132 cm^2 .
- D. 218 cm^2 .

22. [17-18 Final Exam Q17]

The figure shows the net of a cuboid. If it is folded, the volume of the cuboid is



- A. 82.5 cm^3 .
- B. 112.5 cm^3 .
- C. 225 cm^3 .
- D. 315 cm^3 .

~ End ~