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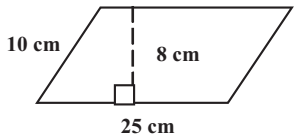
Module Test A — Module 13

Circle the correct answer for each problem.

1. What is the area of the parallelogram?



a. 80 cm^2 b. 100 cm^2 c. 200 cm^2 d. 250 cm^2

c. 200 cm^2

2. A circle has an area of 2,826 square inches. Which is closest to the length of the diameter of the circle?

a. 30 in. b. 60 in. c. 450 in. d. 900 in.

b. 60 in.

3. The length of a rectangular field is twice its width. What is the perimeter of the field if the width of the field is 30 meters?

a. 45 m b. 90 m c. 150 m d. 180 m

d. 180 m

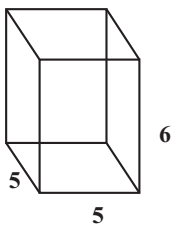
4. To the nearest inch, what is the circumference of a circle whose radius is 6.5 inches?

a. 20 in. b. 41 in. c. 133 in. d. 531 in.

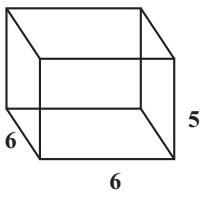
b. 41 in.

5. Which prism has a surface area of 170 square units?

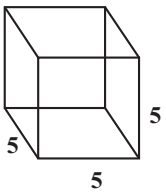
a.



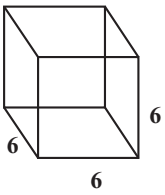
b.



c.



d.



a. SA = 170 square units

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Fill in the blanks with one of the following words:

square cubic triangle trapezoid height slant height lateral surface

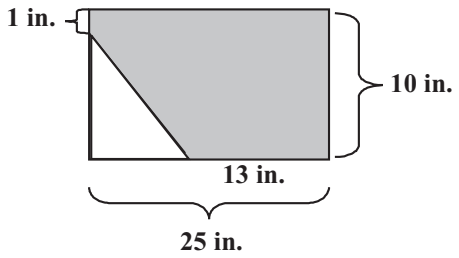
6. To find the area of a **(trapezoid)**, use the formula $A = \frac{1}{2}(b_1 + b_2)h$.

7. It is *not* necessary to find the area of a circle when finding the **(lateral)** area of a cone.

8. The **(height)** of a pyramid is the length of the segment joining the vertex of the pyramid to the base of the pyramid at a right angle.

9. For a solid whose dimensions are given in millimeters, the volume of the solid is given in **(cubic)** millimeters.

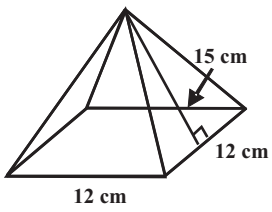
10. Find the area of the shaded region.



196 in.^{2}

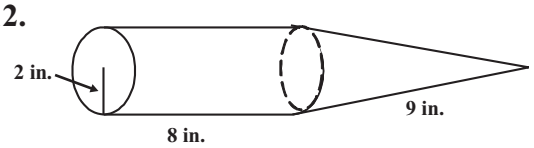
Find the surface area.

11.



504 cm^2

12.



About 169.56 in.^{2}

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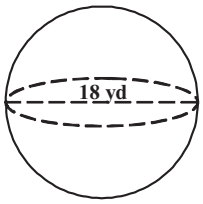
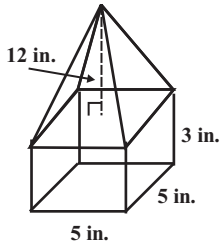
Find the volume.

13.



About 3,052.08 yd^3

14.



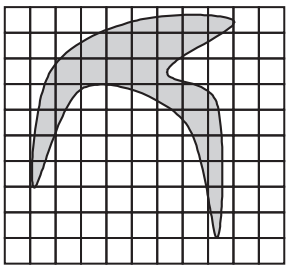
175 in.^{3}

15. The area of a rectangle must be 48 square feet. What whole-number dimensions will give the least perimeter? Explain how you found your answer.

I made a table and listed the factor pairs of 48. These are the lengths and widths of different rectangles. Then, I found the perimeter of a rectangle with each set of dimensions. The dimensions which give the least perimeter are six feet by eight feet.

L (ft)	*W* (ft)	*P* (ft)
1	48	98
2	24	52
3	16	38
4	12	32
6	8	28

16. Show how to estimate the area of the shape at right. Each ☐ is 1 km^2.



Count the squares that are completely inside the boundary: 6. Then, count the squares through which the boundary passes: 34. Take half of that: 34 ÷ 2 = 17. Add this amount to the number of squares completely inside the shape: 6 + 17 = 23. The area is about 23 km^2.

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