Geometry Ch 9 Review

STATION 1 Vocabulary.

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Fill in the blank with the appropriate vocabulary word

1. The number of cubic units contained in the interior of a solid. (How much "space" it holds).

2. The segment from the center of a sphere to a point on the sphere.

3. A _____ has only one circular base.

4. A _____ has 2 circular bases.

5. The "corners" of a geometric shape are called _____.

6. A solid with two bases and no curves

7. The set of all points in space that are equidistant to the same point.

8-10 refer to Euler's formula: $F + V = E + 2$

8. F stands for _____.

9. V stands for _____.

10. E stands for _____.

32 $LA = 2\pi r h = 2 \cdot 3.14 \cdot 4 \cdot 10 = 251.2\ cm^2$

33 $SA = 2\pi r^2 + 2\pi r h = 2 \cdot 3.14 \cdot 4^2 + 2 \cdot 3.14 \cdot 4 \cdot 10 = 351.68\ cm^2$

34 $V = \pi r^2 h = 3.14 \cdot 4^2 \cdot 10 = 502.4\ cm^3$

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STATION 2

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11. The diameter of a soccer ball is 10 inches. What is the surface area and volume?

12. A polyhedron has 6 faces and and 8 vertices. How many edges does it have?

13. A polyhedron has 9 edges and 4 faces, how many vertices does it have?

14. A box of lucky charms is 2 inches wide, 12 inches tall and 8 inches long. What is the volume of the box?

1. volume
2. radius
3. cone
4. cylinder
5. vertices
6. prism
7. sphere
8 faces
9. vertices
10. edges

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STATION 3

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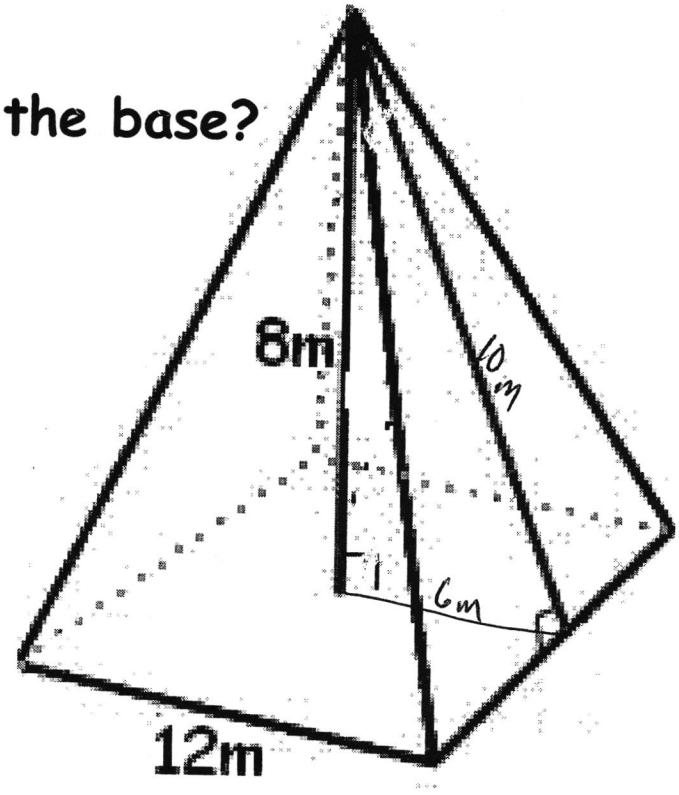
15. What is the area of the base?

16. What is the perimeter of the base?

17. What is the slant height?



18. What is the lateral area?

19. What is the surface area?

20. What is the volume?

11. radius = 5in $\rightarrow$ $SA = 4\pi r^2$

$= 100\pi$

$= 314 in^2$

$V = \frac{4}{3}\pi r^3$

$= 166.\overline{6}\pi$

$= 523.\overline{3} in^3$

12. $F + V = E + 2$

$6 + 8 = E + 2$

$14 = E + 2$

$12 = E$

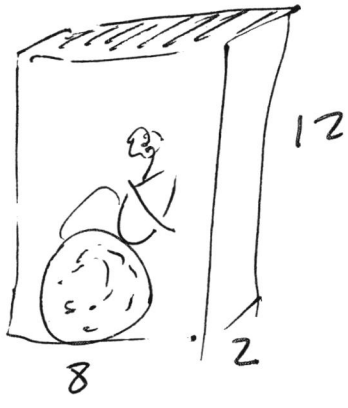
13. $F + V = E + 2$

$4 + V = 9 + 2$

$4 + V = 11$

$V = 7$

14.



$B: 8 \times 2 = 16$

$V = B \times h$

$= 16 \times 12$

$= 192 in^3$

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STATION 4

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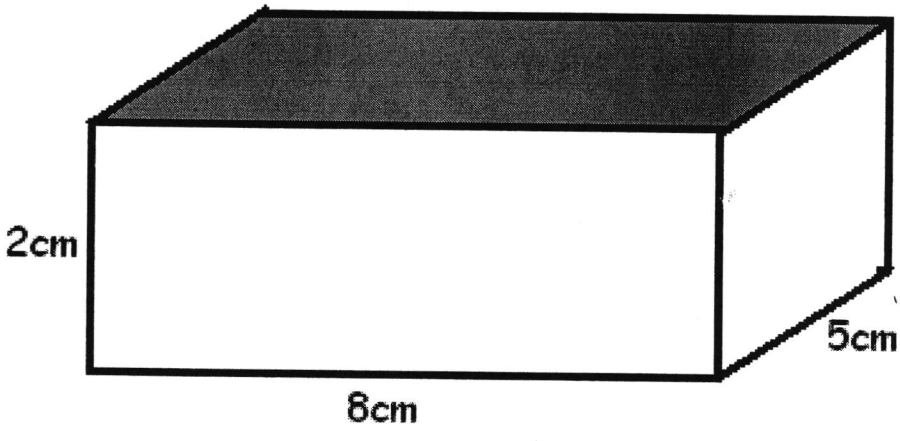
The base is the shaded side

21. What is the area of the base?

22. What is the perimeter of the base?



23. What is the lateral area?

24. What is the surface area?

25. What is the volume?

15. $144_m{}^2$ 12×12

16. 48_m 12×4

17. 10_m by pythagorean thm

$$6^2 + 8^2 = l^2$$
$$100 = l^2$$
$$10 = l$$

18. $\frac{1}{2} \cdot p \cdot l = \frac{1}{2} \cdot 48 \cdot 10 = 240_m{}^2$

19. $240 + 144 = 384_m{}^2$

20. $\frac{1}{3} \times B \times h = \frac{1}{3} \times 144 \times 8 = 384_m{}^3$

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STATION 5

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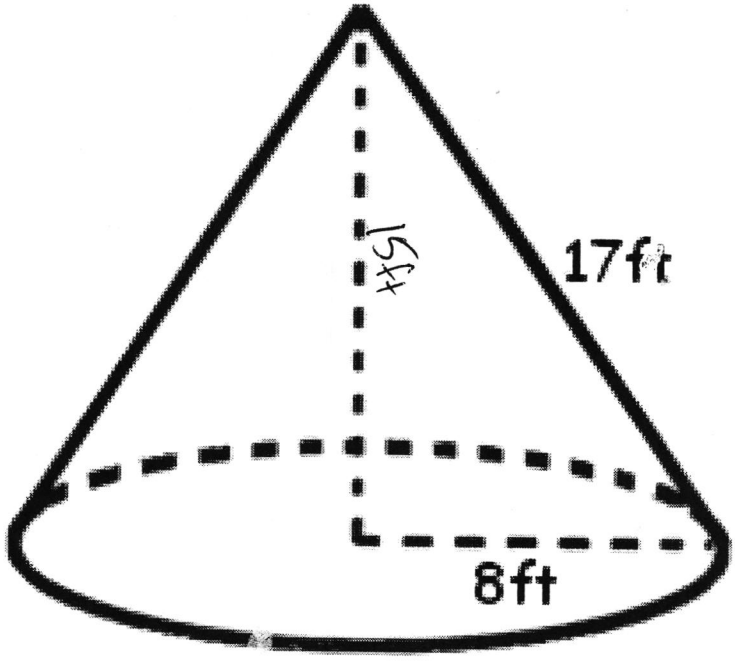
26. What is the area of the base?

27. What is the circumference of the base?

28. What is the height?



29. What is the lateral area?

30. What is the surface area?

31. What is the volume?

21. The bases are the top & bottom sides

$B = 8 \times 5 = 40\,cm^2$

22. $8 + 5 + 8 + 5 = 26\,cm$

23. $ph = 26 \cdot 2 = 52\,cm^2$

24. $2 \times 40 + 26 \cdot 2 = 132\,cm^2$

25. $B \times L = 40 \times 2 = 80\,cm^3$

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STATION 6

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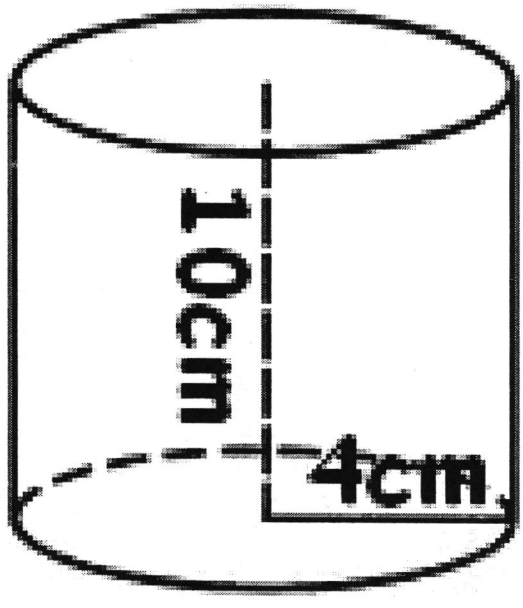
32. What is the lateral area?

33. What is the surface area?

34. What is the volume?



26. $A = \pi r^2 = \pi \cdot 8^2 = 64\pi = 200.96$

27. $C = 2\pi r = 2\pi \cdot 8 = 16\pi = 50.24$

28. 15

29 $136\pi = 427.04$

30 $200\pi = 628$

31 $320\pi = 1004.8$