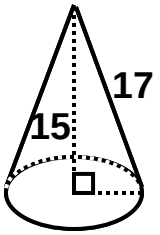
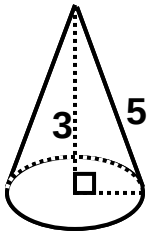
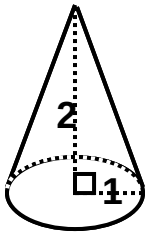
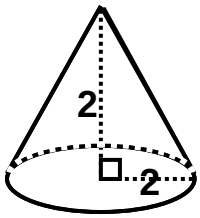
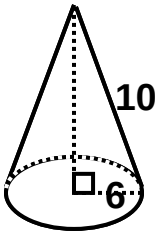
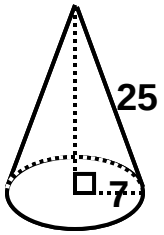
NAME_____**DATE**_____**PER.**____

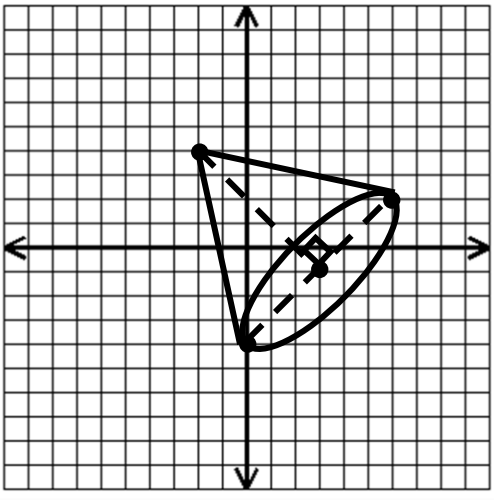
SURFACE AREA & VOLUME OF CONES

Find the indicated measure(s) for each of the following. Answer to even numbered problems on 1 – 6 should be rounded to the nearest tenth.

1. LA = _____ TA = _____ V = _____	
2. LA = _____ TA = _____ V = _____	
3. LA = _____ TA = _____ V = _____	
4. LA = _____ TA = _____ V = _____	
5. LA = _____ TA = _____ V = _____	

6. LA = _____ TA = _____ V = _____	
7. V = _____	A cone has a radius of 9 cm and a slant height of 15 cm. Find the Volume.
8. LA = _____	A cone has a radius of 12 in. and a height of 35 in. Find the Lateral Area.
9. TA = _____	A cone has a volume of 2560π cm^3 and a height of 30 cm. Find the Total Area to the nearest tenth.

Given the cone graphed in the coordinate plane, answer the questions that follow.

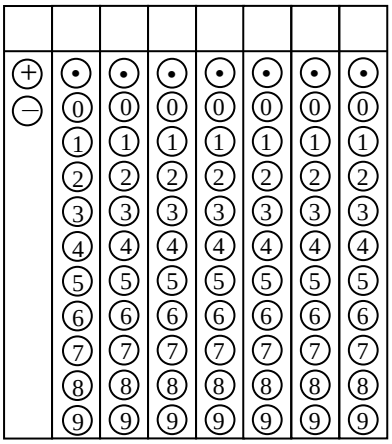


10. _____	What is the EXACT Lateral Area?

11. _____	What is the Total Area to the nearest tenth?
12. _____	Write the equation of the line containing the height.

Find the correct answer for each of the following. Clearly circle or bubble in your answer as appropriate. *Work must be shown in order to receive credit!*

13. Find the number of centimeters in the height of a pyramid that has a base area of 6 cm^2 and a volume of 32 cm^3?



14. A pyramid and a rectangular prism each have a height of 7 inches and a base that is a 7-inch square. Which statement is ***not*** true?

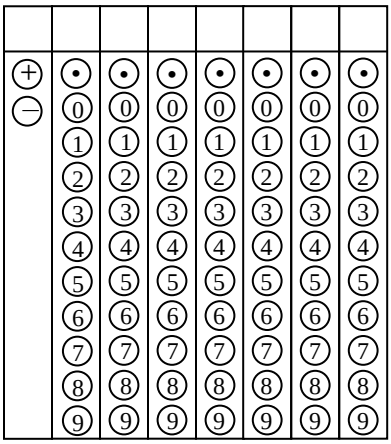
A. The volume of the pyramid is less than the volume of the prism.

B. The areas of the bases are equal.

C. The volumes are equal.

D. The surface area of the pyramid is less than the surface area of the prism.

15. A rectangular prism has a base that Is a 7-inch square and height of 10 inches. Find the number of square inches in the surface area.



16. Which pyramid has a surface area of 502 cm^2 when rounded to the nearest whole number?

A. a regular hexagonal pyramid with a base edge length of 6 centimeters and a slant height of 12 centimeters
B. a square pyramid with a base edge length of 16 centimeters and a slant height of 11 centimeters
C. a regular hexagonal pyramid with a base edge length of 8 centimeters and a slant height of 14 centimeters
D. a square pyramid with a base edge length of 11 centimeters and a slant height of 16 centimeters

17. An orange juice container is a rectangular prism that measures 8 inches by 3.5 inches by 2 inches. A grape juice container is a rectangular prism that measures 9 inches by 3 inches by 2 inches. Which best describes the relationship between the two containers?

A. The grape juice container has the greater volume.
B. The orange juice container has the greater volume.
C. The volumes are equal.
D. The relationship cannot be determined.

18. What regular three-dimensional object has the same shape in all six orthographic views?

A. Rectangular prism
B. Triangular prism
C. Triangular pyramid
D. Cylinder

19. A right square pyramid has a slant height of 13 inches and a lateral area of 260 square inches. What is the volume of the pyramid to the nearest cubic inch?

A. 100 in^3
B. 108 in^3
C. 400 in^3
D. 433 in^3

20. The dimensions of a rectangular crate are 4 feet, 6 feet, and 8 feet. What is the volume?

E. 18 ft^3
F. 96 ft^3
G. 192 ft^3
H. 208 ft^3