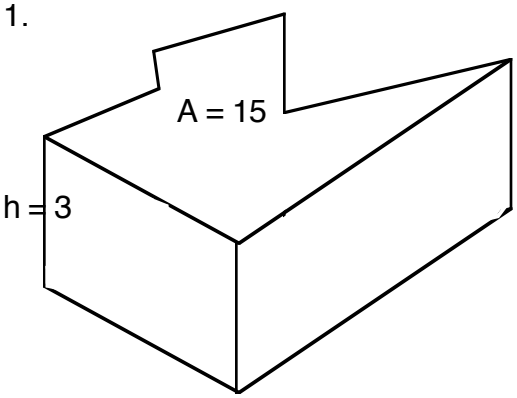
Name: _____

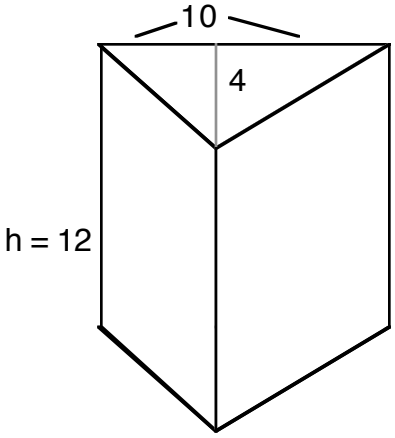
CLASSWORK 119

Find the volume of each figure.

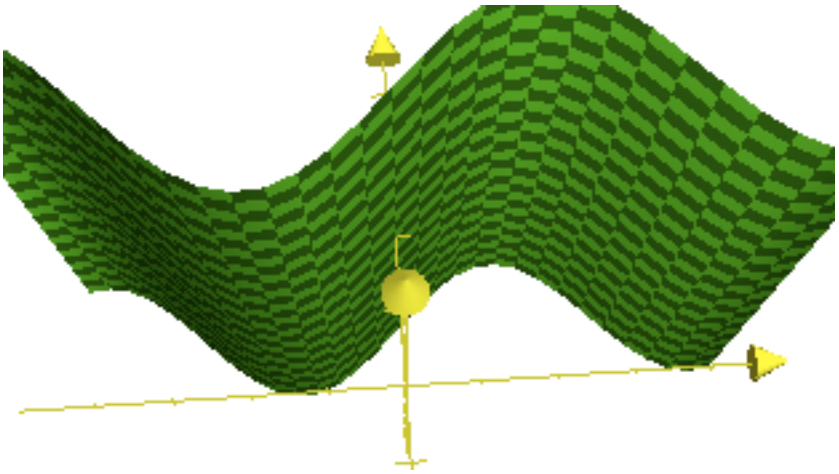
1.



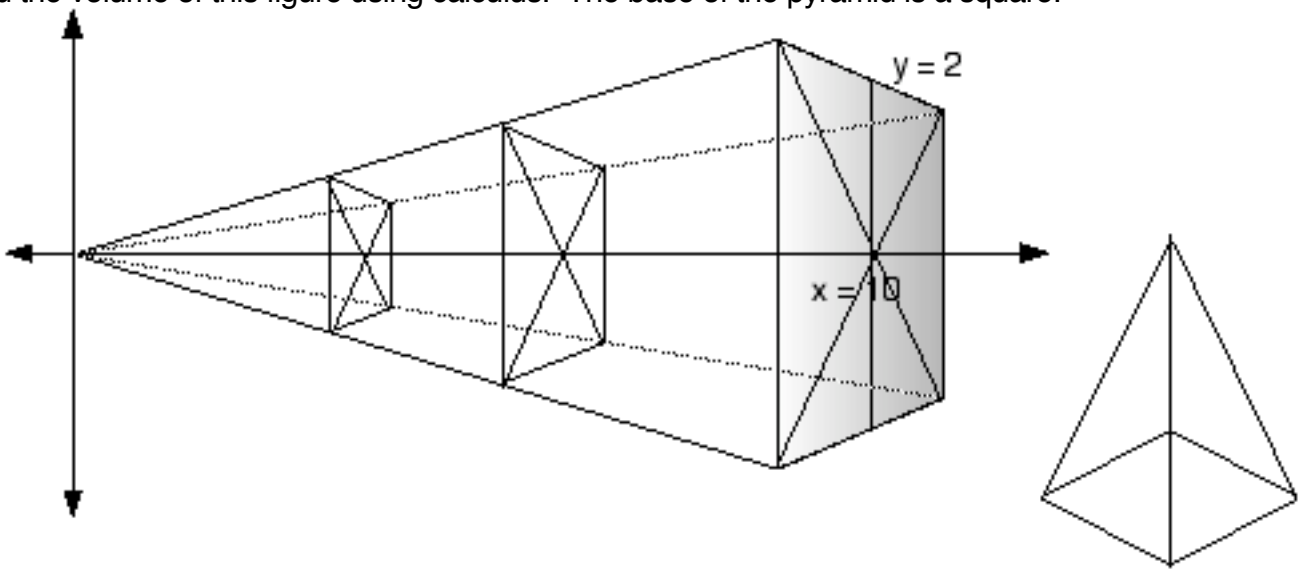
2.



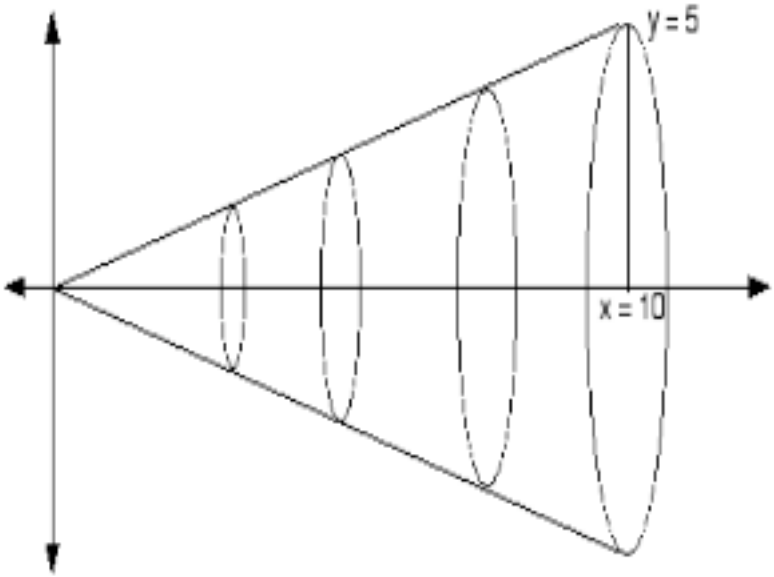
3. The base of a box is in the shape of $y = \sin x + 2$ from 0 to 5. The height of the box is 4. Find the area of the box.



4. Find the volume of this figure using calculus. The base of the pyramid is a square.



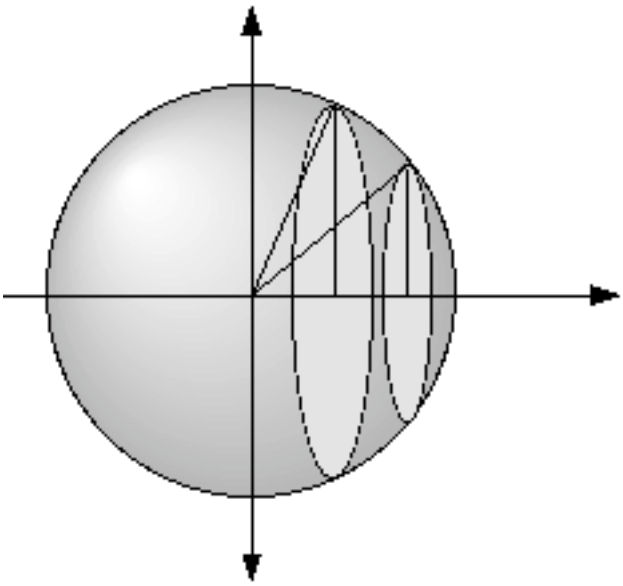
5. Find the volume this figure using calculus.



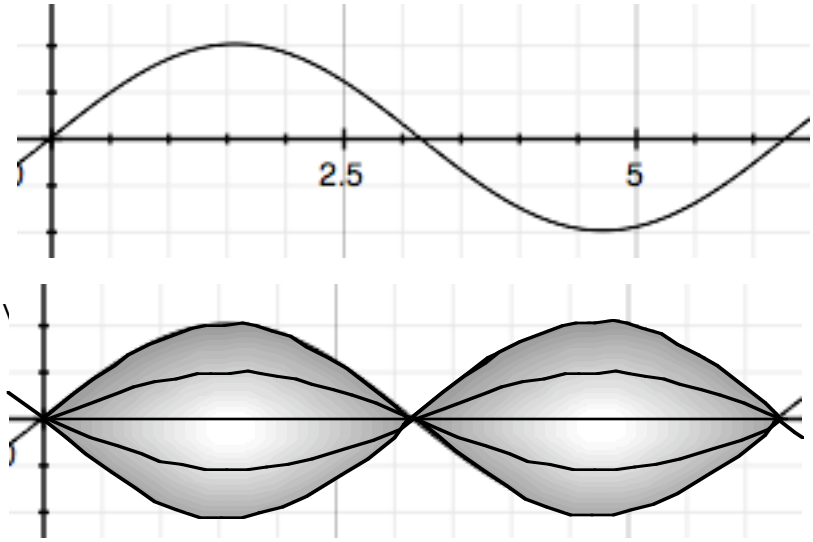
6. Find a general formula for the volume of a cone with radius **r** and height **h** using calculus.

7. Find the general formula for the volume of a pyramid with "radius" **r** and height **h**.

8. Prove the formula for the volume of a sphere with radius **r** using calculus.



9. Find the volume of the solid that is created when you rotate $y = \sin x$ around the x- axis from 0 to 2π.



10. The base of a solid is created by the curve $y = 9 - x^2$ between $x = -3$ and $x = 3$. The height of the solid is defined as the y value. Find the volume of the figure.