Math 3 **Volume and Surface Area**

*EQ: How do we find the surface area and volume of geometric figures?*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Volume | Prism | Cylinder | Cone | Sphere | Pyramid |
|  |  |  |  |  |
| **Note:** B = area of the base |

**Volume of Regular Figures**

Find the volume of the following figures. Show all work.



1.
2.





1.
2.

1. You buy two cylindrical candles with different dimensions. Candle A has a diameter of 4 inches and a height 8 inches. Candle B has a diameter of 6 and a height of 5. Which candle contains more wax?
2. If one guppy requires 5 L of water to live happily, what is the maximum number of guppies that should be kept in this aquarium?



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Surface Area | Prism | Cylinder | Cone | Sphere |
|  |  |  |  |
|  B = area of the base p = perimeter of base $l$ = slant height  |

**Lateral Area:** The area of the sides of a three-dimensional figure. This area excludes the area of the base(s).

**Surface Area of Regular Figures**

Find the surface area of the following figures. Show all work.



1.
2.
3. A cylindrical can of beans is shown below. What is the area of the label that surrounds the can without overlapping? Round answer of the nearest tenth of a square inch.

1. What is the lateral area of the cone shown?



1. A classroom globe as a diameter of 18 inches. Find the approximate surface area, in square inches, of the globe.