## Measurement Problem with Algebra

1. The circumference of a circle is $\mathbf{1 0 6 . 7 6} \mathbf{~ c m}^{\mathbf{2}}$. Determine the radius of the circle.
2. A rectangular prism has a length of $\mathbf{8 2} \mathbf{~ m m}$, a height of $\mathbf{1 4 7} \mathbf{~ m m}$, and a volume of $\mathbf{2 7 7 2 4 2} \mathbf{~ m m}^{\mathbf{3}}$. Determine the width of the rectangular prism.
3. The area of the following trapezoid is $\mathbf{5 2 2 6} \mathbf{~ m}^{\mathbf{2}}$. Determine the height of the trapezoid.

4. A square based pyramid has a height of $\mathbf{2 5} \mathbf{~ c m}$ and a volume of $\mathbf{6 0 7 5} \mathbf{c m}^{\mathbf{3}}$. Determine the length of the base of the pyramid.
5. The surface area of a sphere is $\mathbf{1 1 3 . 0 4} \mathbf{~ d m}^{2}$. Determine the volume of the sphere.
6. The perimeter of the following shape is $\mathbf{6 6 . 8 5} \mathbf{~ m m}$. Determine the length of the missing sides.

7. The surface area of the following shape is $\mathbf{4 7 9 2 0} \mathbf{~ k m}^{2}$. Determine the missing value of $X$.

