

### 4.3 Classwork: Volume of a prism (box)

1. Find the volume of a rectangular prism with length 5 cm, width 4 cm, and height 3 cm.
  
  
  
  
  
  
  
  
  
  
2. Find the volume of a pyramid ( $V = \frac{1}{3}Bh$ ) having a height of 11.3 inches and with a square base having side lengths of 7 inches. Express your result to the *nearest cubic inch*.
  
  
  
  
  
  
  
  
  
  
3. Find the volume of a sphere with a radius of 30 inches, to the *nearest whole cubic inch*. (The formula for the volume of a *sphere* is  $V = \frac{4}{3}\pi r^3$ )
  
  
  
  
  
  
  
  
  
  
4. A waffle cone has a radius of 2 inches and height of 4 inches.
  - (a) Write down the general formula for the volume of a cone.
  
  
  
  
  
  
  
  - (b) Find the volume of the waffle cone.
  
  
  
  
  
  
  
  
  
  
5. A given sphere has a radius of 6 inches.
  - (a) Write down the general formula for the volume of a sphere, using  $r$  to represent the radius.
  
  
  
  
  
  
  
  - (b) Find the volume of the sphere, to the *nearest whole cubic inch*.

6. A pyramid with a square base has a volume of 576 cubic inches. Its height is the same as the lengths of the sides of the base. Find the area of its base.