4.2 Classwork: Volume of a prism (box)

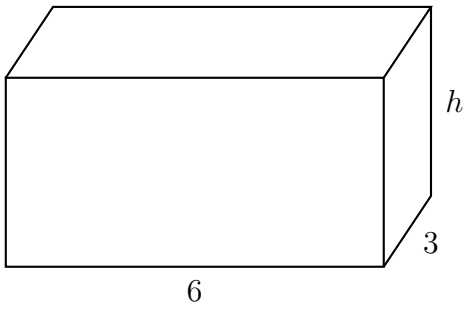
1. Find the volume of a rectangular prism with length 5 cm, width 4 cm, and height 3 cm.

2. A triangle has an area of 68 square centimeters. Its height is 16 centimeters. Find the length of its base.

3. The perimeter of a square is 10 inches. Find its area.

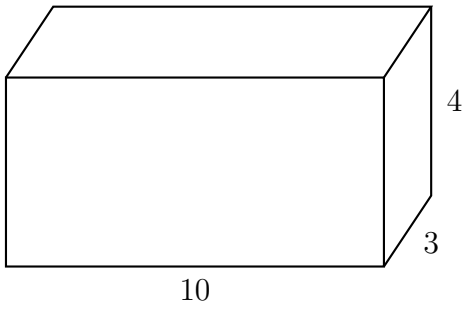
4. The volume of a rectangular prism (box) is $V = 72$ cubic feet. Its length is $l = 6$ feet and depth of $w = 3$ feet. Find its height. Start with the equation

   $V = l \times w \times h = 72$



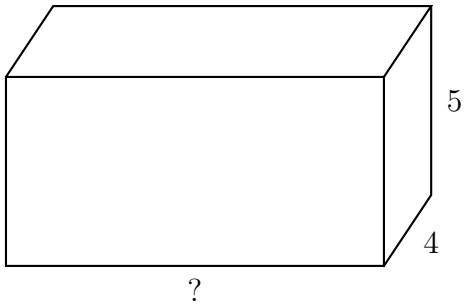
5. Find the volume of a rectangular prism (box). Its length is $l = 10$ feet, its height $h = 4$, and depth is $w = 3$ feet. Start with the equation

   $V = l \times w \times h$



6. The volume of a rectangular prism (box) is $V = 110$ cubic feet. Its height is $h = 5$ feet and depth of $w = 4$ feet. Find its length. Start with the equation

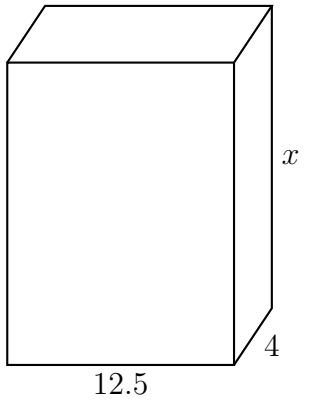
   $V = l \times w \times h = 110$



7. A rectangular prism (shown below) has a volume $V = 925$ cubic feet. Calculate the area of its base and then solve for its height.

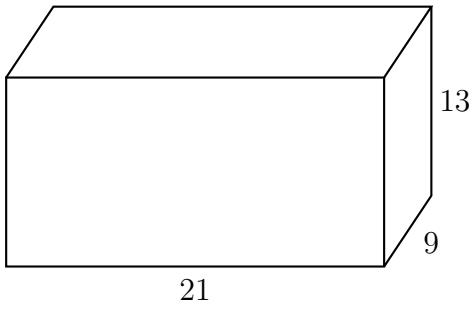
   (a) The base measures 12.5 by 4 in feet. Find its area.

   (b) Find the prism's height, x.



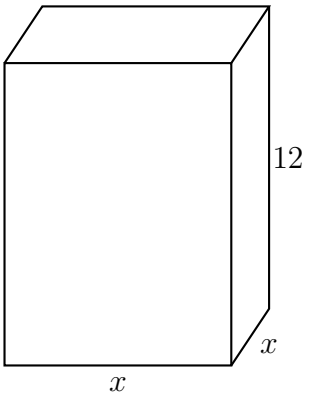
8. Find the volume of a rectangular prism (box). Its length is $l = 21$ inches, its height $h = 13$ inches, and depth is $w = 9$ inches. Start with the equation

   $V = l \times w \times h$



9. A rectangular prism has a square base. Its volume is $V = 507$ cubic centimeters and its height is $h = 12$ cm.

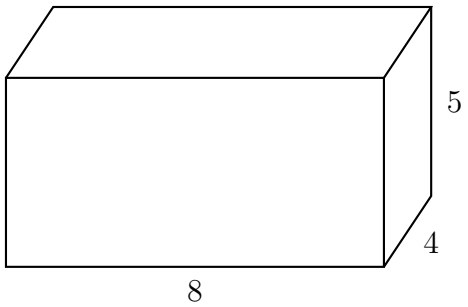
   Calculate the dimensions of its base.



10. The volume of a box (rectanglar prism) is the product of its length, width, and height.

$$V = l \times w \times h$$

    Example: Find the volume of a box with a length of 8 centimeters, a depth of 4 cm, and a height of 5 cm. Show the calculation.



11. Find the volume of a box (rectanglar prism) having a length of 12 inches, a width of 6 inches, and a height of 5 inches. Show the calculation.