

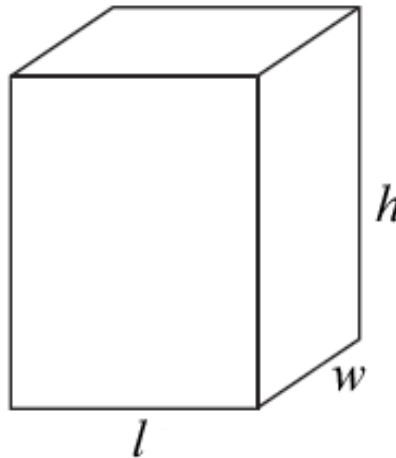
State Standard #3 Worksheet

Standard:

3.0 Students are adept at operations on polynomials, including long division.

Volume of a Right Rectangular Prism:

$$V = l \cdot w \cdot h$$



Find the volume of the right rectangular prism given the following values for the sides:

1. $l = (x+2)$ $w = (x-1)$ $h = (2x-3)$ 1) $V =$ _____
2. $l = (x+3)$ $w = (x-2)$ $h = (x+4)$ 2) $V =$ _____
3. $l = (x-5)$ $w = (x-4)$ $h = (x-3)$ 3) $V =$ _____

Given the volume and one side, find the missing sides (use polynomial long division and factoring):

4. $V = x^3 + 6x^2 + 11x + 6$ cubic units, $l = x + 1$, find w and h .	4) $l = \underline{x+1}$ $w =$ _____ $h =$ _____
5. $V = x^3 - 3x^2 - 4x + 12$ cubic units, $l = x + 2$, find w and h .	5) $l = \underline{x+2}$ $w =$ _____ $h =$ _____
6. $V = x^3 - x^2 - 14x + 24$ cubic units, $l = x + 4$, find w and h .	6) $l = \underline{x+4}$ $w =$ _____ $h =$ _____