

## Problem 6

In each of Problems 1 through 6, sketch the graph of the given function on the interval  $t \geq 0$ .

$$g(t) = (t - 1)u_1(t) - 2(t - 2)u_2(t) + (t - 3)u_3(t)$$

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### Solution

This function can be written in terms of the more familiar Heaviside function,  $H(t)$ , which is defined to be 1 if  $t > 0$  and 0 if  $t < 0$ .

$$g(t) = (t - 1)H(t - 1) - 2(t - 2)H(t - 2) + (t - 3)H(t - 3)$$

