3. [12 points] A gardener is growing a plant.
   - Let $t$ be the number of days after the plant first sprouts.
   - The height of the plant $t$ days after it sprouts is $H(t)$ inches.
   - The gardener gives the plant $W(t)$ cups of water on the $t^{th}$ day after it sprouts.
   - When the gardener uses $M$ cups of water, she mixes in $V(M)$ teaspoons of special plant vitamins.

Suppose that $V(M)$ and $H(t)$ have inverses. For each of the following, give a practical interpretation of the expression in the context of the problem, or explain why the expression does not make sense in this context.

a. [3 points] $H(6) = 3$

**Solution:** The height of the plant 6 days after it sprouts is 3 inches.

b. [3 points] $V(W(4))$

**Solution:** $V(W(4))$ is the number of teaspoons of special plant vitamins the gardener mixed in on the fourth day after the plant sprouted.

c. [3 points] $W(H(6))$

**Solution:** This expression does not make sense: the units of $H(6)$ are inches, while the input of $W$ should be days.

d. [3 points] $\frac{H^{-1}(12) - H^{-1}(9)}{12 - 9} = 2$

**Solution:** Between when the plant was 9 inches and 12 inches tall, it took the plant an average of 2 days to grow 1 inch taller.