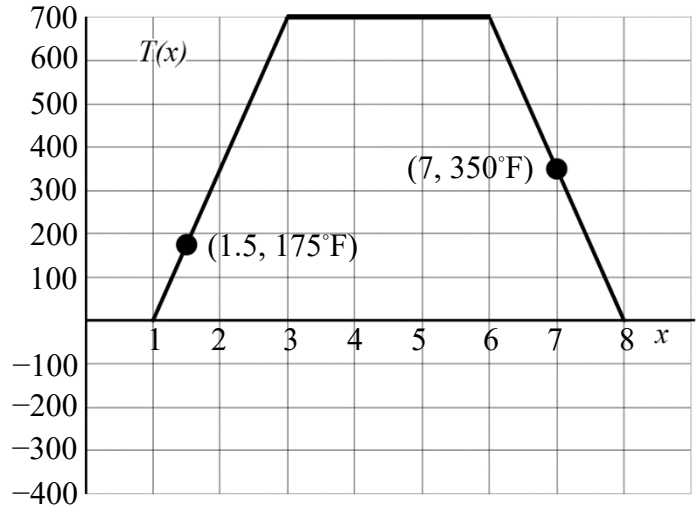
Oven Temperature

The graph shows the temperature in a pizza oven during a self-cleaning cycle. Let $T(x)$ be the temperature after x hours. Complete the boxes below. Write DNE if it does not exist.



1. Use the graph to find the derivative at each value.

$T'(1.5) =$ ☐

$T'(4) =$ ☐

$T'(7) =$ ☐

2. What is the measurement of unit of the values of the derivatives in the previous question? Circle one.

A. hours B. °F C. ovens D. dollars E. dollars per oven F. ovens per dollar
G. dollars per hour H. hours per dollar I. hours per °F J. °F per hour

3. Which of these is the interpretation of the meaning of $T'(1.5)$?
Circle one and complete the box for the choice you circled.

A. At 1.5 hours, the temperature of the oven is ☐ °F.

B. At 1.5 hours, the temperature of the oven is increasing at a rate of ☐ °F per hour.

C. At 1.5 hours, the temperature of the oven is decreasing at a rate of ☐ °F per hour.

4. Which of these is the interpretation of the meaning of $T'(4)$? Circle one and, if applicable, complete the box.

A. At 4 hours, the temperature of the oven is 0 °F.
B. At 4 hours, the temperature of the oven is not changing
C. At 4 hours, the temperature of the oven is increasing at a rate of ☐ °F per hour.
D. The temperature of the oven is increasing at a rate of 4 °F per hour.

5. Which of these is the interpretation of the meaning of $T'(7)$
Circle one and complete the box for the choice you circled.

A. At 7 hours, the temperature of the oven is ☐ °F.

B. At 7 hours, the temperature of the oven is increasing at a rate of ☐ °F per hour..

C. At 7 hours, the temperature of the oven is decreasing at a rate of ☐ °F per hour.

6. $\lim_{x\to 3^-} \frac{T(x)-700}{x-3} =$ ☐ $\lim_{x\to 3^+} \frac{T(x)-700}{x-3} =$ ☐ $T'(3) = \lim_{x\to 3} \frac{T(x)-700}{x-3} =$ ☐

7. $\lim_{x\to 6^-} \frac{T(x)-700}{x-6} =$ ☐ $\lim_{x\to 6^+} \frac{T(x)-700}{x-6} =$ ☐ $T'(6) = \lim_{x\to 6} \frac{T(x)-700}{x-6} =$ ☐

8. Sketch the graph of $T'(x)$ on the above set of axes.