The number of bacteria in a refrigerated food is given by $N\left(t\right)=20t^{2}-20t+120$, for -2 ≤ t ≤ 14 and where t is the temperature of the food in Celsius. At what temperature will the number of bacteria be minimal?

Hint 1: Use the vertex formula:

$$x=\frac{-b}{2a}$$