Exercise 6

For the following exercises, find the x- or t-intercepts of the polynomial functions.

$$C(t) = 2(t-4)(t+1)(t-6)$$

Solution

To find the t-intercepts, set $C(t) = 0$ and solve the equation for t.

$$2(t-4)(t+1)(t-6) = 0$$

$$t - 4 = 0 \quad \text{or} \quad t + 1 = 0 \quad \text{or} \quad t - 6 = 0$$

$$t = 4 \quad \text{or} \quad t = -1 \quad \text{or} \quad t = 6$$

Therefore, the t-intercepts are $(-1, 0)$ and $(4, 0)$ and $(6, 0)$.