

Exercise 8

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

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

Solution

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

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

$$t = 0 \quad \text{or} \quad t - 2 = 0 \quad \text{or} \quad t + 1 = 0$$

$$t = 0 \quad \text{or} \quad t = 2 \quad \text{or} \quad t = -1$$

Therefore, the t -intercepts are $(-1, 0)$ and $(0, 0)$ and $(2, 0)$.

