9. [5 points] Find a formula for one polynomial \( p(x) \) that satisfies all of the following conditions.

- The vertical intercept of the graph of \( p(x) \) is 7.
- The graph of \( p(x) \) has horizontal intercepts \(-1, 2, \) and \(3\) (and no others).
- \( \lim_{x \to \infty} p(x) = -\infty \) and \( \lim_{x \to -\infty} p(x) = \infty \).
- The degree of \( p(x) \) is at most 6.

Show your work and reasoning carefully. You might find it helpful to first sketch a graph. There may be more than one possible answer, but you should give only one answer.

\[
p(x) = \quad \text{_______________________________}
\]

10. [4 points] If \( K = G(t) = \frac{e^t + 3}{7 + e^t} \) find a formula for \( G^{-1}(K) \).

Answer: \( G^{-1}(K) = \quad \text{_______________________________} \)