Part I. Create a polynomial with lead coefficient 1 having the following characteristics:

1. Zeros at $x = 1$ and $x = -1$; and having degree 2

$f(x) = (x-1)(x+1)$ ✓

2. Zeros at $x = 1$ and $x = 0$; and having degree 3

$g(x) = x(x-1)(x-1) = x(x-1)^2$

or $g(x) = x^2(x-1)$

3. Zeros at $x = 0$, $x = 1$, $x = \frac{2}{3}$, and $x = -3$; and having degree 4

$h(x) = (x)(x-1)(x-2/3)(x+3)$ ✓

$h(x) = (x)(x-1)(3x-2)(x+3)$ ☺