1, 2: Graph and on the graph mark the x and y-intercepts. No credit if the graph isn’t smooth.

1(2). $y = x^3 - 9x$  Three roots, two turning points.
\[ y = x(x + 3)(x - 3) \]

2(2). $y = (x - 1)(x - 4)^2$ Two roots, two turning points.

3, 4, 5: Graph. On the graph mark the x and y-intercepts. Mark the vertical and horizontal asymptotes with their equations (yes = a or x = a). Just writing "a" won’t do. The graphs must be smooth.

3(4). $y = \frac{x - 1}{x + 1}$
One y-intercept, one x-intercept, one horizontal, one vertical asymptote.

4(3). $y = \frac{-1}{(x - 2)^2}$ One intercept, two asymptotes.

5(4). $y = \frac{x}{(x + 1)(x - 3)}$ Two vertical, one horizontal asymptote.
One intercept.