1. Let $f(x) = \sqrt{x}$. Find the equation for the line tangent to the graph of $f$ at $x = 4$ and determine where the line intersects the $x$-axis.

2. Let $g(x) = x^3 - x$. Determine on which intervals $g$ is positive or negative and on which intervals $g$ is increasing or decreasing.

3. If you finish early, please draw a math cat.