Quiz 7. April 10, 2013. Name

1. Find the critical points for $y = f(x) = (x^3 - 9x)^{\frac{4}{5}}$ and place them on the number line below.

$\longrightarrow$ x

Then determine the intervals over which the function $y = f(x)$ is increasing or decreasing and then find the values of x for which (local) maximum and minimum values occur. **Note:** calculators may only be used in elementary mode, but not in calculus mode.

2. It has been asserted that the choice of a spherical geometry for all of its vaults saved the Sydney Opera project. Explain what precisely this spherical geometry is and discuss how it saved the project.