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.

$\xrightarrow{\hspace{8cm}} \quad x$

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.

2. Describe the two features of the beams of the horizontal roof of the Concourse of the Sydney Opera House that made it possible for the roof to span without obstructions an area bigger than a football field.