

1. What is the definition of a decreasing function? Is the function $f(x) = \frac{1}{x}$ decreasing? Justify your answer.
2. Explain how to find the determinant of a four by four matrix.
3. Can you explain the notion of a contour line? Find the contour line of $f(x, y) = \frac{x}{y}$ at the height $c = 3$.

This is just an example, there might appear more such questions of similar type during the oral exams.