Question	1	2	3	Total
Points	2,5	2,5	2	7
Grade				

Answer the questions in the spaces provided. If you run out of room for an answer, continue on the back of the page.

1. Is it true that $x^n + y^n = z^n$ if (x, y, z) and n are positive integers?. Explain.

2. Prove that the real part of all non-trivial zeros of the function $\zeta(z)$ is $\frac{1}{2}$.

3. Compute

$$\int_0^\infty \frac{\sin(x)}{x}$$