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

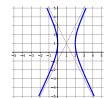
Name and section: _

Instructor's name: _

- 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

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

- 4. Which of these famous physicists invented time?
 - A. Stephen Hawking
 - B. Albert Einstein
 - C. Emmy Noether
 - D. This makes no sense
- 5. Which of these famous physicists published a paper on Brownian Motion?
 - O Stephen Hawking
 - Albert Einstein
 - O Emmy Noether
 - I don't know
- 6. Which is a hyperbola?



В.

