## Article Title Here

A. K. Kapoor

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Decoding analyticity of rational functions .

Properties of derivative.

Complete the following sentences by indicating which property is used.

- 1. The function z is analytic, therefore  $z^2, z^3, \cdots, z^n$  are all analytic because
- 2. As  $z, z^2, \cdots, z^n$  are analytic at all points in complex z plane, all polynomials are analytic because
- 3. All rational functions of the form P(z)/Q(z) are analytic at all points except where \_\_\_\_\_ because
- 4. Composite function, (function of a function) f(g(z)) is analytic everywhere the following property holds.