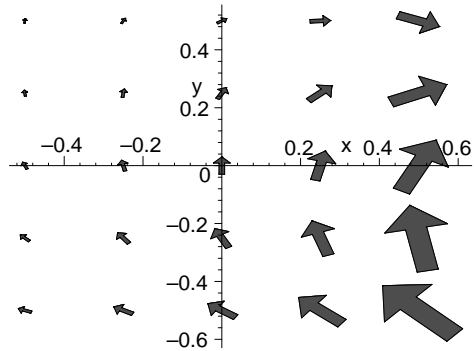
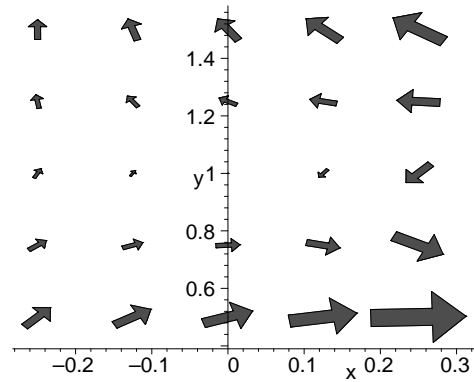
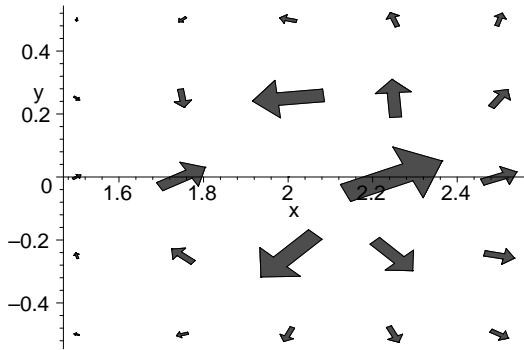


The Polya Field

Math 402, Winter 2001

Directions Below are shown three graphs from the Polya Field of an unknown function $f(z)$.



Which of the following functions corresponds to these graphs? Why?

(a) $f(z) = \frac{\sin(z)(z-i)}{(z-2)^2}$

(b) $f(z) = \frac{(z-i)}{(z-2)}$

(c) $f(z) = \frac{e^z(z-i)}{(z-2)}$

(d) $f(z) = \frac{i(z-i)^4}{(z-2)}$

(e) $f(z) = \frac{e^z(z-i)}{(z-2)^2}$

(f) $f(z) = \frac{\cos(z)(z-2)^2}{(z-i)}$