Consider a high-speed jet airplane flying at a standard altitude of 12 km with 0.82 cruising Mach number. At a point on the wing of the airplane, the pressure was (independently) measured to be 20,000 Pa (absolute). Calculate the Mach number at this point.

Hints . . .
- Do not even consider Bernoulli’s equation!
- The flow may still be isentropic, even though the flow is no longer incompressible.
- Recall, the speed of sound depends on the temperature.