

1. Air pressure,  $P$ , decreases exponentially with the height,  $h$ , in meters above sea level. The unit of air pressure is called an *atmosphere*; at sea level, the air pressure is 1 atm.

(a) (5 points) On top of Mount McKinley, at a height of 6198 meters above sea level, the air pressure is approximately 0.48 atm. Use this to determine the air pressure 12 km above sea level, the maximum cruising altitude of a commercial jet.

(b) (4 points) Determine  $P^{-1}(0.7)$ . Include units!