$$p = 14.63 \cdot 0.8^a$$

Atmospheric pressure, measured in pounds per square inch (psi) is the force exerted by Earth's atmosphere over a given area. The atmospheric pressure, p, exerted on an airplane flying at an altitude of a miles above sea level can be approximated by the model shown above. What is the best interpretation of  $0.8^a$  in this equation?

- If the airplane reaches the outer extent of the Earth's atmosphere, the atmospheric pressure will be  $0.8\,\mathrm{psi}$ .
- ${ t B}$  If the airplane is at sea level, the atmospheric pressure will be  $0.8~{
  m psi}$ .
- ${
  m C}$  For each mile that the altitude increases, the atmospheric pressure decreases 20%.
- $\hfill \mathsf{D}$  For each mile that the altitude increases, the atmospheric pressure increases 20%.