

NAME:

For each question please show your work!

Speed of light
300,000,000 m/sec

Speed of sound
340 m/sec

- a. Using approximate values for speed of light and sound in the air that are given above, calculate the time it takes light and sound to travel one mile in the *air*, 1 mile = 1,609 m.
- b. Did you get the *big difference between those two times* in (a)? What commonly observed natural phenomenon is due to this difference?
- c. Now calculate how long would it take light to travel from the Earth to the Moon *in space*, distance = 384,400 km, use the same value for the speed of light.
- d. Why am I not asking you to calculate how long sound will travel from the Earth to the Moon? 😊