1. Light travels at a speed of $3 \cdot 10^8$ m/sec. [“m” is for “meters.”]

   (a) A light-year is a unit of length, equal to the distance light travels in one year. How many miles long is one light year?

   (b) The sun is roughly 93 million miles from the earth [this distance varies a bit throughout the year]. How long does it take light from the sun to reach the earth?

   (c) How long does it take light to travel 5 light-years?