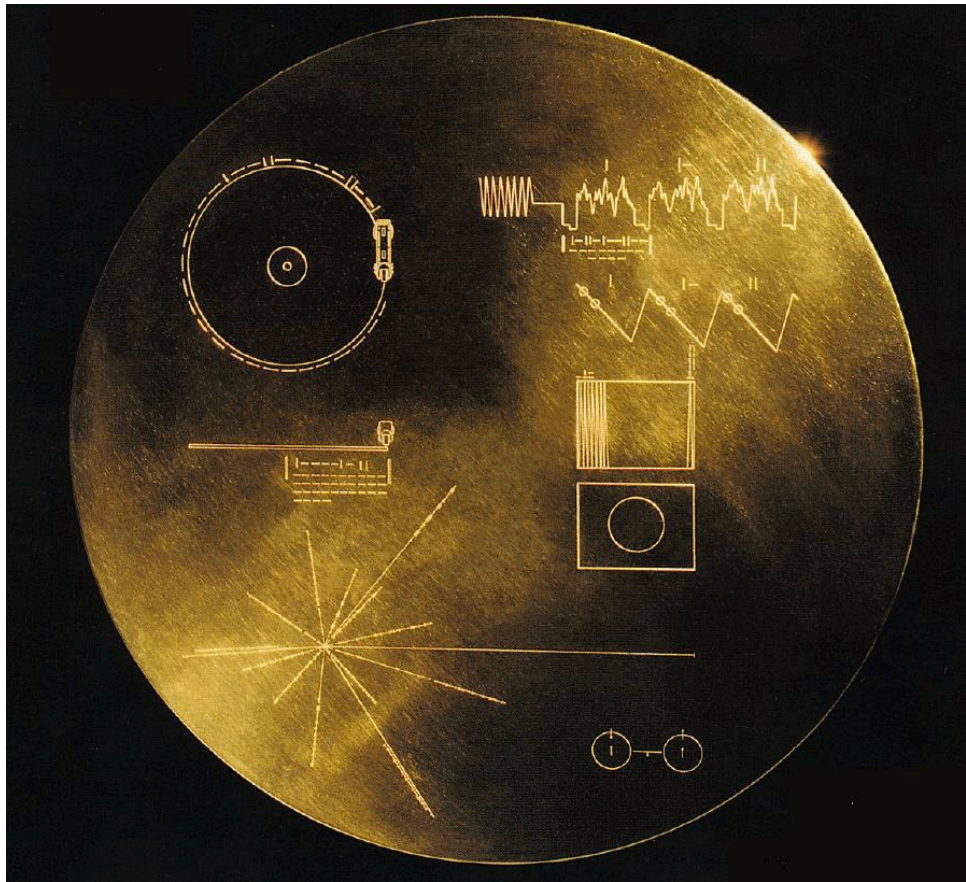


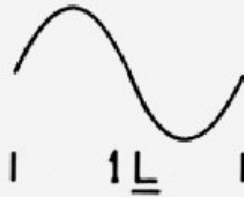
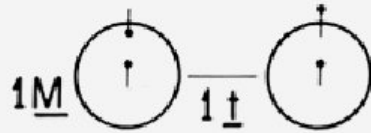
A Message For Intelligent Life Forms

The following pages show the *Voyager I* spacecraft and some of the images encoded on a golden record placed on board. *Voyager I* was launched by NASA on September 5, 1977, and it still transmits data about the outer reaches of our solar system. A team of scientists created the golden record in case intelligent life forms find the spacecraft. The record contains many pages of information about life on earth. The surface of the record contains symbols that will hopefully help someone finding the record to play it. The scientists felt that it was important to explain our number system and arithmetic symbols at the beginning so that numbers could be used to describe other items throughout the record.

Look at the page that introduces our numbers. What do you think the scientists are trying to explain? Why did they choose the examples shown?

What do you think the scientists are explaining on the other pages? Do you think that intelligent beings would be able to understand something about life on planet earth after seeing these? If you were going to add one more page, what would you include in this message to the cosmos?





$$1 \frac{42}{100} \times 10^9 \underline{t} = 1 \underline{s}$$

$$86400 \underline{s} = 1 \underline{d}$$

$$365 \underline{d} = 1 \underline{y}$$

$$6 \times 10^{23} \underline{M} = 1 \underline{g}$$

$$1000 \underline{g} = 1 \underline{kg}$$

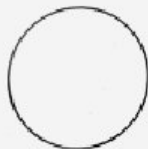
$$6 \times 10^{27} \underline{g} = 1 \underline{e}$$

$$\frac{1}{21} \underline{L} = 1 \underline{cm}$$

$$1 \underline{L} = 21 \times 10^8 \underline{a}$$

$$10^2 \underline{cm} = 1 \underline{m}$$

$$1000 \underline{m} = 1 \underline{km}$$

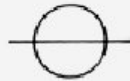
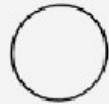


$$139 \times 10^4 \underline{km} \quad 4840 \underline{km} \quad 12400 \quad 12760 \quad 6800$$

$$58 \times 10^6 \underline{km} \quad 108 \quad 150 \quad 228$$

$$333000 \underline{e} \quad \frac{1}{19} \underline{e} \quad \frac{82}{100} \quad 1 \quad \frac{11}{100}$$

$$25 \underline{d} \quad 57 \underline{d} \quad 243 \quad 1 \quad 1 \frac{3}{100}$$



$142 \times 10^3 \text{ km}$ 121×10^3 47600 44600 14000

$778 \times 10^6 \text{ km}$ 1428 2872 4498 591

318 e 95 $14 \frac{6}{10}$ $17 \frac{2}{10}$ $\frac{9}{10}$

$\frac{41}{100} \text{ d}$ $\frac{43}{100}$ $\frac{45}{100}$ $\frac{65}{100}$ $\frac{7}{10}$

