Perform a frequency analysis on the following poem by Ogden Nash.

Fleas
Adam
Had 'em.

A: 4/14	M: 2/14	Z: 0
B: 0	N: 0	
C: 0	O: 0	
D: 2/14	P: 0	
E: 2/14	Q: 0	
F: 1/14	R: 0	
G: 0	S: 1/14	
H: 1/14	T: 0	
I: 0	U: 0	
♗J: 0	V: 0	
K: 0	W: 0	
L: 1/14	X: 0	
	Y: 0	

If an electron and a positron annihilate each other, then how much energy would be given off? ("The **positron** or **antielectron** is the antiparticle or the antimatter counterpart of the electron. The positron has an electric charge of +1e, a spin of ½, and has the same mass as an electron." http://en.wikipedia.org/wiki/Positron)

$$E = mc^2$$
$$E = (2m_e)c^2$$
$$\uparrow$$
both have same mass
$$= 2 * 9.11 \times 10^{-31} * (3.00 \times 10^8)^2$$
$$= 1.64 \times 10^{-13} \text{ Joule}$$

The Leaning Tower of Pisa is 55.863 meters high. Use the concept that the gravitational potential energy is converted into kinetic energy to find the velocity of an object just before it hits the ground – assuming the object was dropped (not thrown) and that air resistance can be neglected.

Energy Before = Energy After
Kinetic Before + Potential Before = Kinetic After + Potential After
$$0 + mgh_{Pisa} = \frac{1}{2}mV_{ground}^2 + 0$$
released

mass drops out, just as Galileo said with acceleration
$$gh = \frac{1}{2}v^2 \qquad V = \sqrt{2gh} = \sqrt{2*(9.8)*(55.863)}$$
$$= 3.31 \times 10^1 \text{ m/s} = 33.1 \text{ m/s}$$