

# Grandma got run over by a reindeer



**(Chorus)**

*Grandma got run over by a reindeer,  
Walking home from our house Christmas Eve.  
You can say momentum's not conserved,  
But as for me and Grandpa, we believe.*

She was on frictionless ice,  
Traveling a speed of 24.  
But she'd forgot her glasses,  
So she did not see Santa ahead of her.

The sleigh came and hit her head on,  
Velocity of 86.  
Their collision was inelastic,  
For they stuck and shared their velocity.

**(Chorus)**

Mass times initial velocity,  
Mass of Grandma 70.  
Mass of the sleigh 1500 kg,  
Their momentums add to 130680.

$$m_1v_{1i} + m_2v_{2i} = m_1v_{1f} + m_2v_{2f}$$

Final momentum on the right side.  
They had the same velocity.  
Also equals 130680:  
Don't you believe that momentum's conserved?

**(Chorus)**

When they found her Christmas mornin',  
At the scene of the attack.  
There were hoof prints on her forehead,  
And incriminatin' Claus marks on her back.

I've warned all my friends and neighbours.  
Better watch out for yourselves."  
They should never give a license,  
To a man who drives a sleigh and plays with elves.



**(Chorus)**

# THE ENERGY SONG

Kinetic Energy  
Kinetic Energy  
Potential too  
Potential too  
Energy's conserved  
Unless it's been disturbed  
Energy