

Meteor Strikes Russia Name:

Explosion size: 500,000 tons of TNT

$$1 \text{ ton of TNT} = 4.184 \times 10^9 \text{ J}$$

Speed: 18 km per second

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

Using  $KE = \frac{1}{2}(\text{mass})(\text{velocity})^2$ ,  
Find the mass of the meteorite.

① Convert "tons of TNT" to Joules.

② Convert 18 km/sec. to      m/s.

③ Calculate the mass of the meteorite in kg.