

Class work 2/14

- 1) A 1000 kg car skids to a stop. It has an initial velocity of 20 m/s
- a) How much work did friction do on the car?
- b) If the force of friction was 5000 N , how far did the car go?
- c) If it took 4.0 sec for the car to come to a stop. What was the power from friction?

$$W = Fd \cos \theta$$

$$W = \Delta E$$

$$KE = \frac{1}{2} mv^2$$

work = change in energy

$$\text{kinetic energy} = \frac{1}{2} (\text{mass}) (\text{velocity})^2$$

$$P = \frac{W}{t}$$

$$\text{power} = \frac{\text{work}}{\text{time}}$$

Work & energy is measured in Joules (J)

power is measured in Watts (W)