

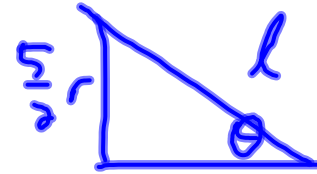
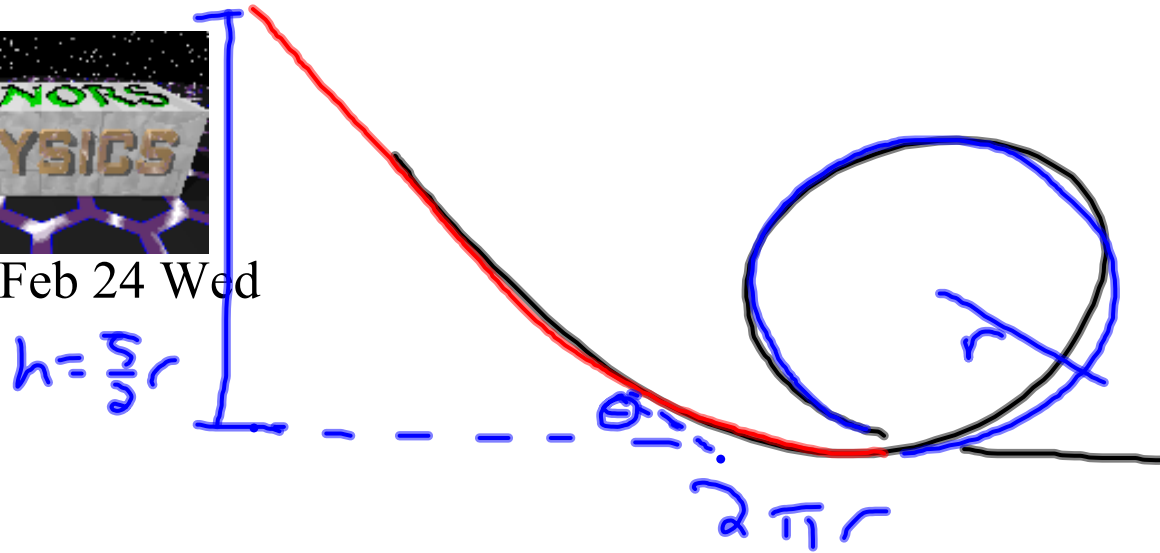


2010 Feb 22 Mon

Finished L151-001



2010 Feb 24 Wed



$$\frac{\frac{5}{2}r}{l} = \sin 60^\circ$$

$$l = \frac{\frac{5}{2}r}{\sin 60^\circ}$$
$$= 2.48r$$



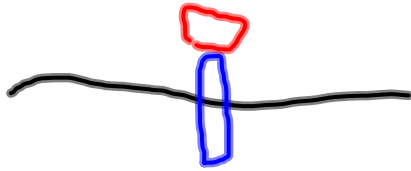
$$E = E$$

$$U_0 + \cancel{K_0} = U + K$$

$$mgy_0 = \cancel{mgy} + \frac{1}{2}mv^2$$

$$9.8 \frac{m}{s^2} \cdot 5m = \frac{1}{2} m v^2$$

$$K = \frac{1}{2} m v^2$$
$$10^6 \text{ J} = \frac{1}{2} m \left( 30 \frac{\text{km}}{\text{h}} \times \frac{1 \text{ h}}{3600 \text{ s}} \times \frac{1000 \text{ m}}{1 \text{ km}} \right)^2$$
$$K^* = \frac{1}{2} m (60 \dots)^2$$



$$K = \frac{1}{2} m \left( 60 \frac{\text{km}}{\text{h}} \right)^2$$

$$K_0 = \frac{1}{2} m \left( 30 \frac{\text{km}}{\text{h}} \right)^2$$

$$\frac{K}{10^6 \text{J}} = \frac{\cancel{\frac{1}{2} m} 60^2}{\cancel{\frac{1}{2} m} 30^2} = \left( \frac{60}{30} \right)^2 = 2^2 = 4$$

$$K = 4 \times 10^6 \text{J}$$

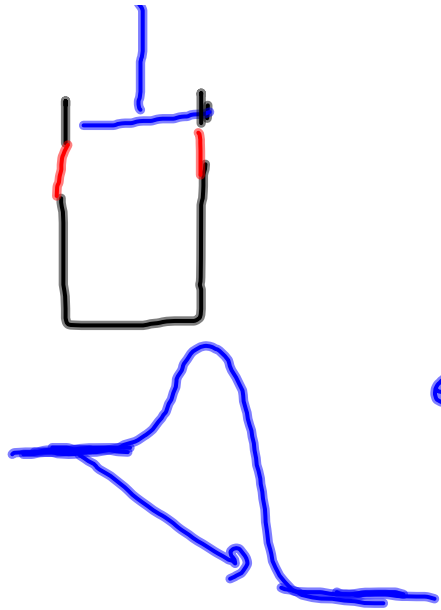


2010 Feb 25 Thu

Power

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

$$[P] = \frac{J}{s} \\ = \text{watt } W$$



# Energy

