Scientist: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

**Conservation of Energy Word Problems**

1. How high has a 12 kilogram pumpkin been lifted off the ground if it has a potential energy of 410 joules before a mischievous teenager smashes it on the floor?

2. A 4kg ball is has a potential energy of 32 J. The ball is then dropped to the ground, what is the velocity of the ball right before it hits the ground?

3. Jason’s overweight cat weighs 15kg, but sill tries to jump up to a window ledge with a kinetic energy of 73.5 J. What height will his cat reach as it jumps?

4. If a 16 kg paper airplane**too heavy** has a potential energy of 32 joules at the top of its flight, how fast is it going before it hits the ground?

5. A 2kg joey, a baby kangaroo, jumps in the air with a velocity of 6 m/s. What maximum height will the joey reach?

6. What is the mass of a water balloon that falls from a height of 3 meters and hits the sidewalk below with a kinetic energy is 95 J.

**add ones with speed and height**

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| --- | --- | --- | --- | --- | --- |
| 1) 3.5 m | 2) 4m/s | 3) 0.5 m | 4) 2m/s | 5) 1.8 m | 6) 3.2kg |