Granny is whizzing down the street on her skateboard and suddenly she notices her pet penguin, Tuxedo, is standing in her pathway. Rather than knock him over, she picks him up and continues in motion on her skateboard without braking.

- 1) What is Granny's momentum before the collision?
- 2) What is Tuxedo's momentum before the collision?
- 3) After the collision, what is the total momentum of Granny 4 Tuxedo?
- 4) After the collision, how fast will Granny & Tuxedo be moving?

## **Before Collision**

Granny's mass 80 kg Granny's speed 3 m/s Tuxedo's mass 40 kg Tuxedo's speed 0 m/s



Warm Up