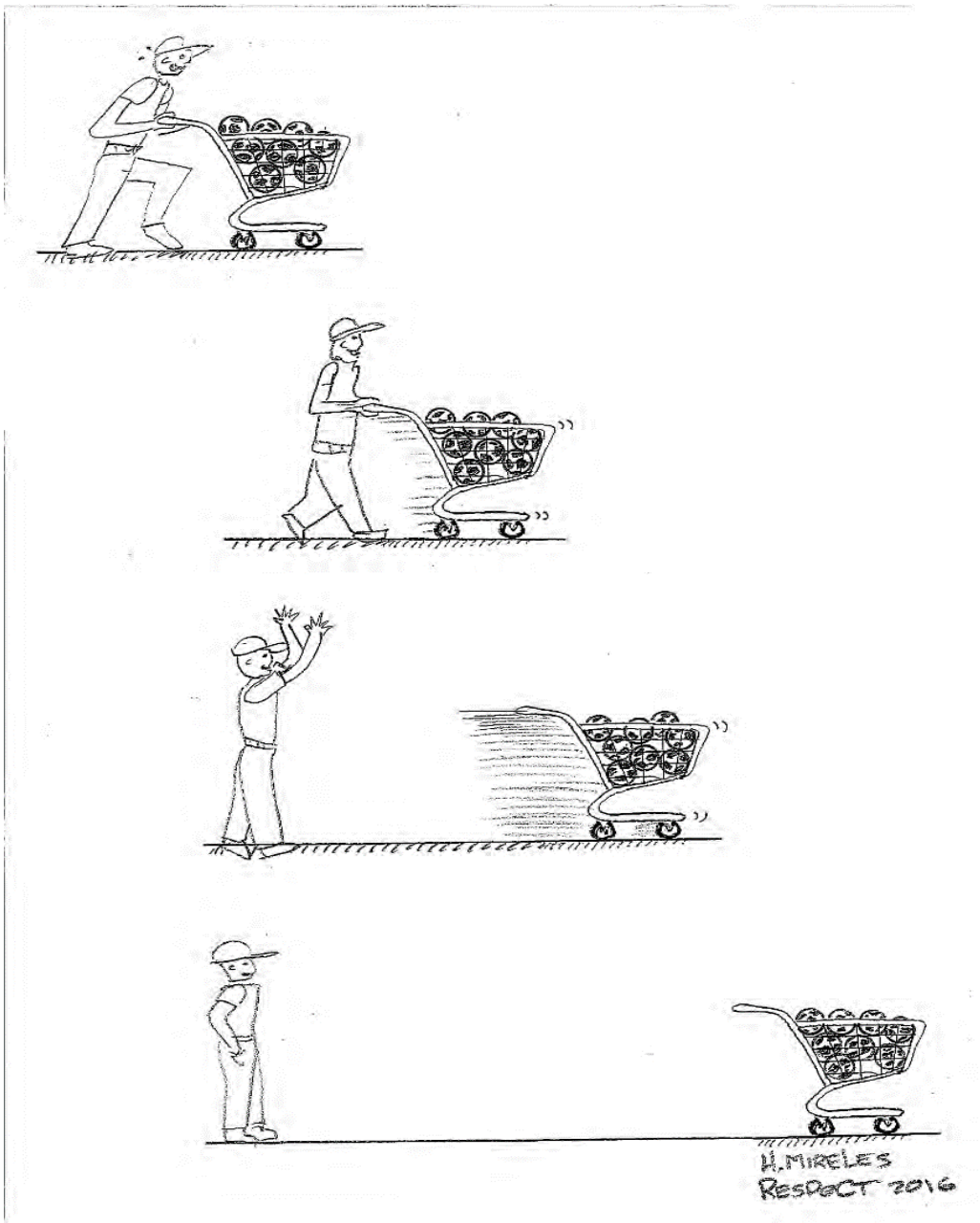
Shoving a Shopping Cart

Scenario 1: A man finds a shopping cart filled with soccer balls and easily gets it moving with a push. He continues pushing the cart to increase the speed. Then he gives the cart a final shove and lets it coast down the aisle. After a while, the cart slows to a stop.

1. Draw a **black vector** showing all of the forces acting on the shopping cart.
2. Draw a **bold black vector** showing the net force on the cart.
3. Draw a **green vector** showing the velocity of the cart.
4. Starting at the ball, draw a **red vector** showing the cart's acceleration.



Scenario 2: The same man discovers another shopping cart filled with bowling balls. With a forceful push, he manages to get it moving. He continues pushing the cart to increase the speed. Then he gives the cart a final shove and lets it coast across the floor. But instead of quickly slowing down and stopping, the cart barrels down the aisle.

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2. Draw a **bold black vector** showing the net force on the cart.
3. Draw a **green vector** showing the velocity of the cart.
4. Starting at the ball, draw a **red vector** showing the cart's acceleration.