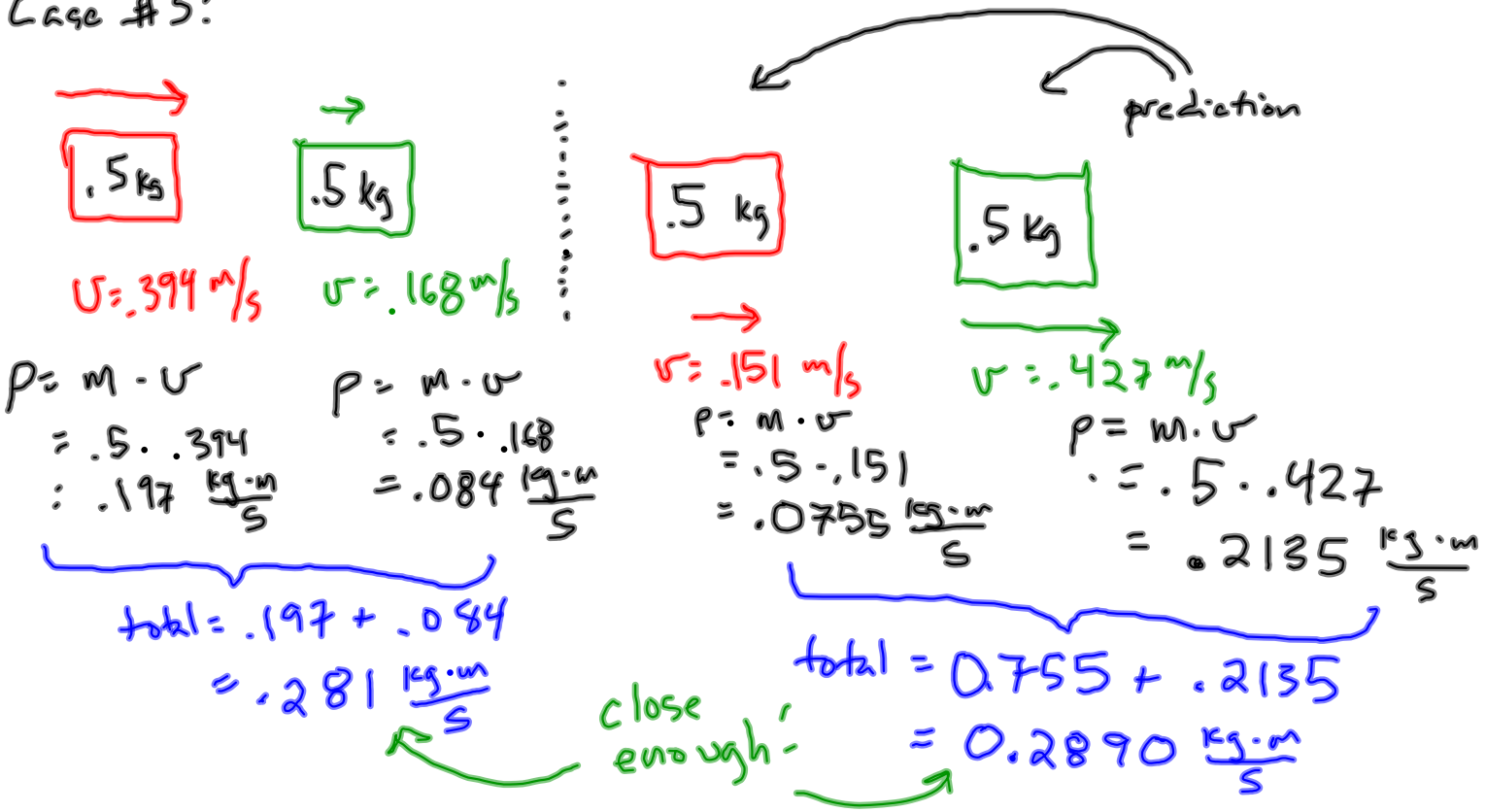
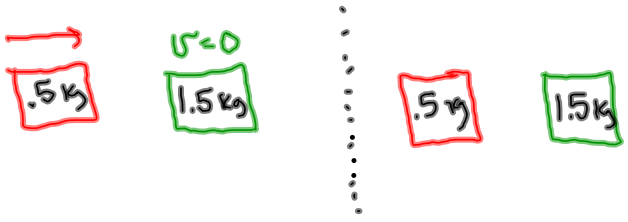
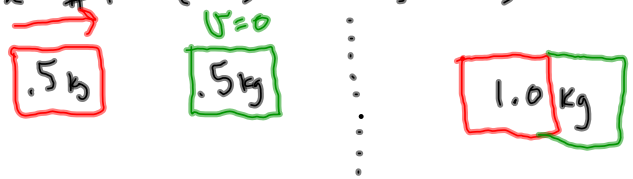
Case #3:


.5 kg
.5 kg
v = .394 m/s
v = .168 m/s
p = m · v
= .5 · .394
= .197 kg·m/s
p = m · v
= .5 · .168
= .084 kg·m/s
total = .197 + .084
= .281 kg·m/s
close enough
.5 kg
.5 kg
prediction
v = .151 m/s
p = m · v
= .5 · .151
= .0755 kg·m/s
v = .427 m/s
p = m · v
= .5 · .427
= .2135 kg·m/s
total = 0755 + .2135
= 0.2890 kg·m/s

Case 4: (unequal masses!)




Case #2: (carts stick together!)




Case #3: (carts stick together; unequal masses!)