Announcement:

No field trip: Required assignment on the web page! (Due 4/22)

Remember: Your momentumometer is designed to help you understand momentum

Conservation of momentum:

The total amount of momentum in a situation doesn't change unless a new object enters the situation.

Analogy:

start: $30

end: $30

Bronco (Hello Kitty!)

~~$2.00~~

$1.00

Eric (Raggedy Ann)

~~$5.00~~

$2.00

Lauren (600 lb jackhammer)

~~$23.00~~

$12.00

Brega ✓

~~$0.00~~

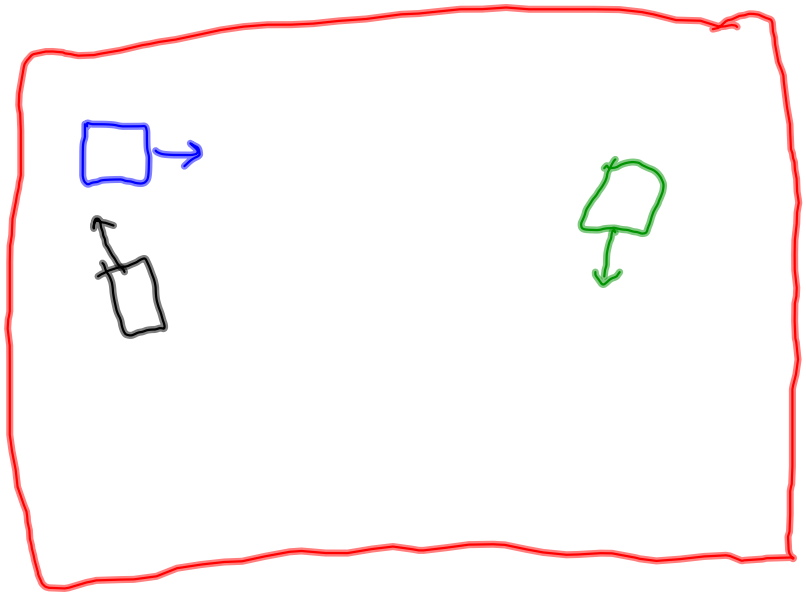
~~$1.00~~

~~$4.00~~

$15.00

Momentum works the same way as money:

It can be transferred from one object to another – but the <u>total</u> momentum in a situation doesn't change

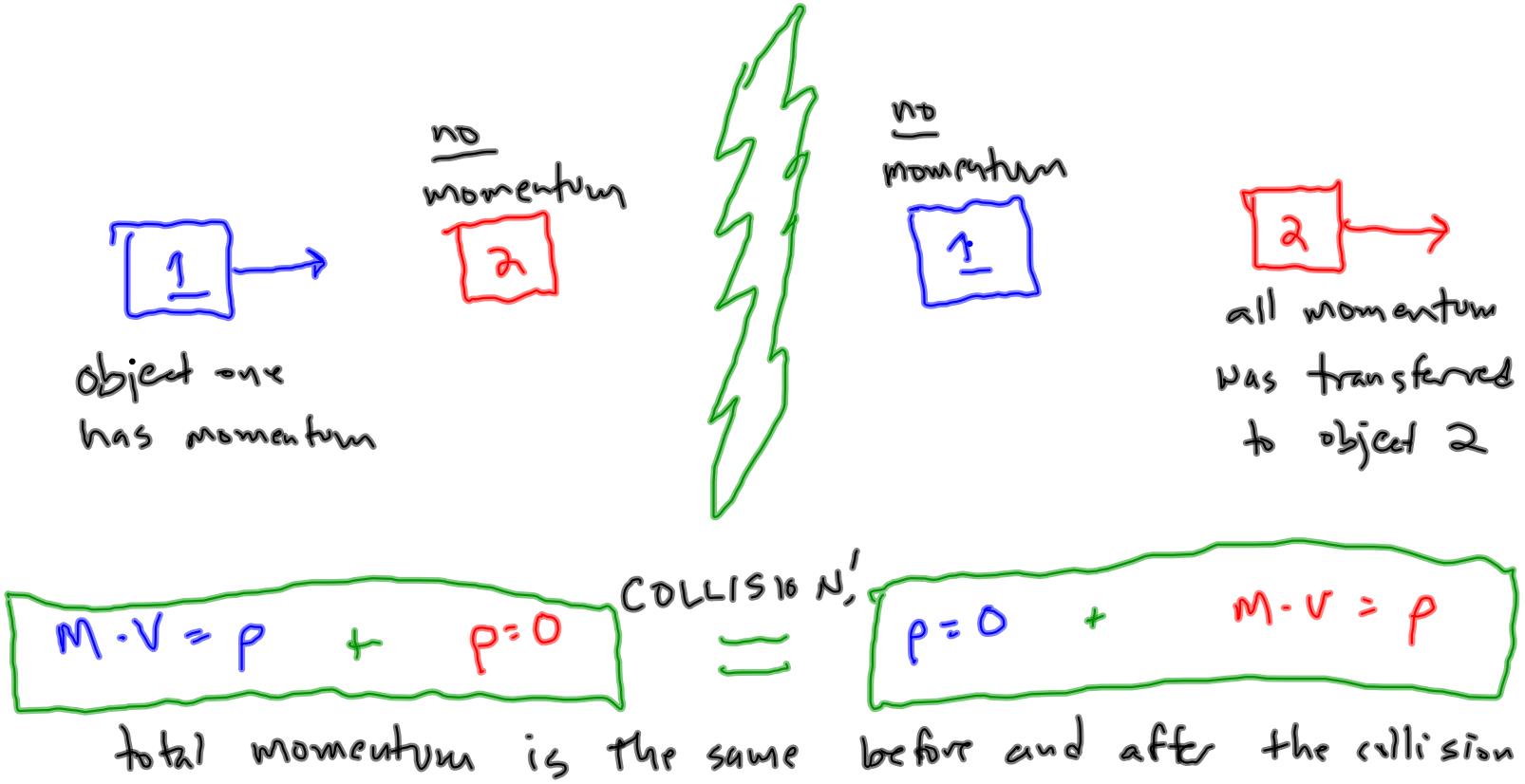


the total momentum will always be the same;

the individual momentum of each car will change!

Transfer of momentum:

- When two objects collided, they can exchange some of their momentum
- There are equations that can allow us to make predictions
- We'll focus on problems where one moving object collides with a stationary object and transfers <u>all</u> of its momentum


no momentum
no momentum
1
2
1
2
object one has momentum
all momentum was transferred to object 2
M·V = P + P=0
COLLISION!
P=0 + M·V = P
total momentum is the same before and after the collision