



Set the masses and velocities and see which way the crash goes afterward.

Choose Clay!

Situation 1

	Vehicle 1	Vehicle 2	
Momentum	2000 kg	1000kg	Momentum
	4 m/s	-2 m/s	

Situation 2

	Vehicle 1	Vehicle 2	
Momentum	1000 kg	1000 kg	Momentum
	4 m/s	-2 m/s	

Afterwards did it: Go right? Left? Stop?

Afterwards did it: Go right? Left? Stop?

Situation 3

	Vehicle 1	Vehicle 2	
Momentum	500 kg	1000kg	Momentum
	4 m/s	-2 m/s	

Situation 4

	Vehicle 1	Vehicle 2	
Momentum	2000 kg	500 kg	Momentum
	2 m/s	-6 m/s	

Afterwards did it: Go right? Left? Stop?

Afterwards did it: Go right? Left? Stop?

After you've finished, go back and calculate the momentum of both vehicles using the formula below.

How could you have predicted which way they will go?

- Momentum = mass • velocity
- $p = m \cdot v$

• Momentum = mass • velocity

• $p = m \cdot v$

In each situation fill in a missing mass and/or velocity to make it go the way indicated

Situation 5

	Vehicle 1	Vehicle 2	
Momentum	1000 kg	2000kg	Momentum
	2 m/s		

Afterwards it STOPPED

Situation 6

	Vehicle 1	Vehicle 2	
Momentum	1000 kg	2000kg	Momentum
		-3 m/s	

Afterwards it STOPPED

Situation 7

	Vehicle 1	Vehicle 2	
Momentum	1000 kg	2000kg	Momentum
	2 m/s		

Afterwards it WENT RIGHT

Situation 8

	Vehicle 1	Vehicle 2	
Momentum	500 kg	800 kg	Momentum
	2 m/s		

Afterwards it WENT RIGHT

Situation 9

	Vehicle 1	Vehicle 2	
Momentum	1000 kg	2000kg	Momentum
	2 m/s		

Afterwards it WENT LEFT

Situation 10

	Vehicle 1	Vehicle 2	
Momentum	800 kg	600 kg	Momentum
	2 m/s		

Afterwards it WENT LEFT