

# A Physics Interactive Quiz : Momentum

Name: \_\_\_\_\_

#	1	question	Answer			0	<--score
# 1	100	m/s is the velocity of a 250 gram bullet fired from a gun. Find the momentum for one bullet.		25	100	0	
# 2	1	m/s is the velocity of 100 kg Boris, running towards you. How many bullets (exactly) would it take to stop Boris?		4	100	0	
# 3	40	is your mass, including the wheeled bed you are on. Calculate your velocity after stopping Boris.		2.5	100	0	
# 4	20	m/s is the velocity of a car going north that crashes into an eastbound car of mass 3000 kg going 20 m/s. If the wreck moves off at 45°, find the mass of the first car		3000	100	0	
# 5	20	m/s is the velocity of a 500 gram baseball. Find the momentum		10	100	0	
# 6	20	If this ball hits your mit at 0.2 seconds, find the force.		50	100	0	
# 7	20	If the ball were initially hit by a bat in 0.001 second, find the force on the bat		10000	100	0	
# 8	30	m/s is the velocity of your car as it hits a tree. Your 50 kg body is slowed to zero in 0.8 seconds by the seatbelts. Find the force.		1875	100	0	
# 9	30	Find the force if you instead hit the windshield taking 0.02 seconds		75000	100	0	
# 10	5	m/s is the velocity of a cart that hits an identical cart standing still. Find the final velocity of the carts if they stick together.		2.5	100	0	

**Extra Credit: Explain how two pool balls colliding, one moving off to the right, one to the left demonstrates conservation of momentum.**