# Classwork 3/9

1) A 0.50 kg football is thrown with a velocity of 15 m/s to the right. A stationary receiver catches the ball & brings it to rest in 0.020 sec. What is the force exerted on the ball by the receiver?

2) A 0.40 kg soccer ball approaches a player horizontally with a velocity of 18 m/s to the north. The player strikes the ball and causes it to move in the opposite direction with a velocity of 22 m/s. What impulse was delivered to the ball by the player?

$p = mv$

$\Delta p = F\Delta t$

$\text{Impulse} = \Delta p = F\Delta t$

hint: For #2 the impulse is just the change in momentum of the ball.