Answer on question #58311, Physics / Mechanics

Question   a 1200-kg truck accelerates from rest to a speed of 25 m/s west. calculate the change in momentum of the truck. What impulse (magnitude and direction) caused this change in momentum?

Solution   Change in momentum is

$$\Delta p = m\Delta v = 1200 \cdot 25 = 30000 \, kg \cdot m/s$$

So, impulse of $30000 \, kg \cdot m/s$ would be needed in the direction of acceleration of truck.