Question#21125

1) a force of 5 newton acts on a body for 0.2 sec. the change in momentum of the body is what?

2) if a force of 1 newton acts on a mass of 500 gram. acceleration will be what?

Answer:

1)

Such as momentum is:

$$P = mv$$

$$v = at$$

According to the second Newton's law:

$$a = \frac{F}{m}$$

$$P = mt\frac{F}{m}$$

$$P = tF$$

$$\boldsymbol{P = 0.2 * 5 = 1\ sec^{-1}}$$

2)

According to the second Newton's law:

$$a = \frac{F}{m}$$

$$\boldsymbol{a = \frac{1}{0.5} = 2\ m/s^2}$$