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| --- | --- |
| **Fill in the Blanks** | **Momentum and Impulse** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Mass of Particle**  | **Initial Velocity**  | **Initial Momentum**  | **Final** **Velocity**  | **Final Momentum**  | **Force**  | **Time**  | **Impulse**  |
| $$4 kg$$ | $$2 ms^{-1} $$ |  | $$5 ms^{-1}$$ |  |  | $$1 s$$ |  |
| $$5 kg$$ | $$0 ms^{-1} $$ |  |  |  | $$7.5 N$$ |  | $$30 Ns$$ |
| $$2 kg$$ |  |  |  | $$18 Ns$$ |  | $$0.5 s$$ | $$8 Ns$$ |
|  | $$1 ms^{-1}$$ | $$3 Ns$$ |  |  | $$2.4 N$$ | $$5 s$$ |  |
| $$100 g$$ | $$20 ms^{-1}$$ |  |  | $$5 Ns$$ |  | $$0.25 s$$ |  |
| $$2 tonnes$$ |  |  | $$4.5 ms^{-1}$$ |  |  | $$3 s$$ | $$6000 Ns$$ |
|  | $$13 ms^{-1}$$ | $$5.2 Ns$$ |  | $$12.4 Ns$$ |  | $$0.1 s$$ | $$7.2 Ns$$ |
| $$2 kg$$ | $$-5 ms^{-1}$$ |  | $$20 ms^{-1}$$ |  | $$250 N$$ |  | $$50 Ns$$ |
| $$0.5 kg$$ |  |  |  | $$10 Ns$$ | $$7 N$$ |  | $$14 Ns$$ |
| $$m kg$$ | $$u ms^{-1}$$ |  |  | $$5mu Ns$$ |  | $$2 s$$ |  |