

$$\frac{dh}{dt} = v \left\{ \frac{dv}{dt} \right\} = \text{total force} \quad \frac{50 \text{ km}}{dt}$$

$$\frac{(x) \text{ kg fuel}}{(dt) (\text{next time interval})} = \text{max rate fuel can be burnt}$$

$$(\text{fuel}) - (\text{burn-rate} * dt)$$

$$\text{Initial:} = 20 \text{ kg fuel} - \overset{1 \text{ kg}}{\text{fuel burn}} * 5 \text{ s}$$

↳ over next time interval, $\rightarrow (5 \text{ s})$

a max of $\frac{15 \text{ kg}}{\Delta t}$ can be burnt

$$\frac{15 \text{ kg}}{5 \text{ s}} = 3 \text{ kg/s}$$

↓

How to
~~change~~ ^{update} [update] when we don't
 know what the next Δt will

be??? Are we telling it to
<end-game> if ~~fuel gets to be~~
the user chooses full-burn
and Δt is too large/long, so
that zero fuel is left??