



Notes for Teachers Using HP Prime. Part 4: Using Formulae

When we know a formula for working something out, it is helpful to be able to use it repeatedly working out different things.



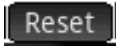
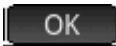












How fast does a rocket go after launch? Well it keeps changing, because it is accelerating and decelerating. So, we can only talk about its average speed.

$$\text{average speed} = \frac{\text{distance travelled}}{\text{time taken}}$$

We can write this using letters as $s = \frac{d}{t}$

You may see this as $v = \frac{s}{t}$

USING A FORMULA

1. Press Apps 
2. Click the Solve  icon
3. On the screen click **Reset** then **OK** then **Start**   
4. Press          
5. Press  and enter some data.





When astronauts train in zero gravity, they fly in a modified airliner downwards for 2500m. This takes 30 seconds. How fast are they flying on average?

Use the cursor to move to the D line and type 2500

and press

Use the cursor to move to the T line and type 30

and press

The cursor will move to the S line. Now click Solve.

The average speed is 83 metres per second.

The screenshot shows a calculator interface with two views: 'Solve Symbolic View' and 'Solve Numeric View'.

Solve Symbolic View: Shows the equation $E1: S = \frac{D}{T}$. Below it are input fields for E2, E3, E4, E5, and E6. A button labeled 'Enter function' is visible, along with 'Edit', '√', '=', 'Show', and 'Eval' buttons.

Solve Numeric View: Shows the result $S: 83.3333333333$. Below it are input fields for D: 2,500 and T: 30. A button labeled 'Enter value or press solve' is visible, along with 'Edit', 'Info', 'Defn', and 'Solve' buttons.

EXPERIMENT

How long would it take to go down 3500m at this speed? Use the cursor to edit the 2500 in D, then move the cursor to T and click **Solve**. (You should get 42 seconds)

How far would it descend at an average 100 metres per second for the 30 seconds? Use the cursor to change the S and the T lines. Now move the cursor to the D line and click **Solve**.

(You should get 3000 metres)

