## Using various TeX/LaTeX macros

$\begin{smallmatrix} G \\ E \end{smallmatrix}\!\!\begin{smallmatrix} \searrow \\ \nearrow \end{smallmatrix} N \to P$ is easy.

$$\begin{array}{ccccc} G & \to & N & \to & P \\ & & \uparrow & & \\ & & E & & \end{array}$$

That looks good, doesn't it! The E over N version seems to require a medskip:

$$\begin{array}{ccccc} & & E & & \\ & & \downarrow & & \\ G & \to & N & \to & P \end{array}$$

## Using substack

The genotype-network-phenotype mapping is:

$$\begin{smallmatrix} G \to \\ E \to \end{smallmatrix} N \to P$$

And here it is inline – $\begin{smallmatrix} G \to \\ E \to \end{smallmatrix} N \to P$. And now inline with `\textstyle` G and E – $\begin{smallmatrix} G \\ E \end{smallmatrix}\!\!\begin{smallmatrix} \searrow \\ \nearrow \end{smallmatrix} N \to P$. This also uses substack, but with N as a `\mathop{}`: $G \to \underset{E}{N\uparrow} \to P$?

## Using genfrac

Here's another way to represent it, using the `genfrac` command from `amsmath`.

$$\begin{array}{ccccc} G & \to & N & \to & P \\ & & \uparrow & & \\ & & E & & \end{array}$$

This is also using `genfrac` but with the E on top:

$$\begin{array}{ccccc} & & E & & \\ & & \downarrow & & \\ G & \to & N & \to & P \end{array}$$

The problem with genfrac is that it doesn't produce a very nice looking inline version – $G \to \begin{smallmatrix} N \\ \uparrow \\ E \end{smallmatrix} \to P$?

## Using atop

Display style atop:

$$\begin{matrix} G \\ E \end{matrix} \to N \to P$$

And here it is inline – $\begin{smallmatrix} G \\ E \end{smallmatrix} \to N \to P$. This also uses `atop` but uses a double arrow symbol from the MnSymbol package – $\begin{smallmatrix} G \\ E \end{smallmatrix} \rightrightarrows N \to P$. And now with squiggly arrows and `\textstyle` G and E. – $\begin{matrix} G \\ E \end{matrix} \rightsquigarrow N \to P$

This is `atop` as well, but using script style arrows:

$$\begin{matrix} G \\ E \end{matrix} \rightsquigarrow N \to P$$

Here's another way to represent it using atop:

$$G \to \begin{matrix} N \\ \uparrow \\ E \end{matrix} \to P$$

## Using atop with sideset

Here's some more takes using `\atop` in combination with `\sideset{}`:

$$\begin{matrix} G \\ E \end{matrix} \rightsquigarrow N \to P$$

And the inline version – $\begin{matrix} G \\ E \end{matrix} \rightsquigarrow N \to P$. Followed by more text, how does it effect the interline spacing? Does it make things look funny? Well, does it?

$$\begin{matrix} G \\ E \end{matrix} \rightsquigarrow N \to P$$

And inline it looks like: $\begin{matrix} G \\ E \end{matrix} \rightsquigarrow N \to P$

And the inline version – $\begin{matrix} G \\ E \end{matrix} \rightsquigarrow N \to P$.