## Restriction enzyme worksheet

Use the restriction enzymes below to cut the single strands of DNA. Then mark each fragment on the gel with a line that matches the number of bases for each strand.

| Restriction enzymes |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Rsal |  |  |  |  |
| --G T \| A C-- | $\rightarrow$ | --G T |  |  |
| --C A \| T G-- | $\rightarrow$ | --C A |  |  |
| Sty I ( $\mathrm{W}=\mathrm{A}$ or T ) |  |  |  |  |
| --C \| C W W G G-- |  | --C |  |  |
| --G G W W C \| C-- | - | --G G |  |  |

## 3 single strands of DNA

(i) Rsal

G C T A A A T C T C G G A G A GTTGA
A G T A C G C A C T C G A T T T A G A G
C CTCTCAACTTCATGCGTGA
Number of fragments created $=$
Fragment lengths (number of bases) $=$
(ii) Sty I

GTTGAAGTACGCCATGGTAA
A T C T C G G A G A CAACTTCATG
C G G TACCATTTAGAGCCTCT
Number of fragments created $=$
Fragment lengths =
(iii) Both Rsa I and Sty I

C G G A G A T G G T A C A A T C G C C T
$T \mathrm{G} G \mathrm{~T} A \mathrm{~A} A \mathrm{~T} \mathrm{C} T \mathrm{G} \mathrm{C} \mathrm{C} \mathrm{T} \mathrm{C}$ A C C A
$T \mathrm{G} T \mathrm{~T}$ A G C G G A A C C A T T T A G A

