

Solutions

Each answer shows the steps, then the **result**.

2.1

- A sugar, a phosphate group, and a nitrogen base

2.2

- Any one: DNA is double-stranded / RNA single-stranded; DNA has deoxyribose / RNA has ribose; DNA has thymine / RNA has uracil

2.3

- The sequence of bases

3.1 C

- the sequence of bases

3.2

(a)

- DNA: double-stranded, deoxyribose; RNA: single-stranded, ribose

(b)

- Uracil

3.3

- The bases can be arranged in any order along a long strand, and the number of possible sequences grows enormously with length, so a vast number of distinct genes is possible