

## KEY FACTS

- DNA: double helix, made of nucleotides (sugar + phosphate + base)
- Bases: A pairs with T, C pairs with G (complementary base pairing)
- Gene: section of DNA coding for a specific protein
- Chromosomes: coiled DNA + proteins. Humans: 46 chromosomes (23 pairs) in body cells
- Human Genome Project: sequenced all ~3 billion base pairs of human DNA
- ★ Protein synthesis: Transcription (DNA→mRNA in nucleus) then Translation (mRNA→protein at ribosome)

## EQUATIONS / FORMULAS

**Bases paired: A–T and C–G (complementary base pairing)**

## KEY TERMS

<b>Gene</b>	Section of DNA coding for a specific protein
<b>Chromosome</b>	Coiled DNA strand carrying many genes
<b>mRNA</b>	Messenger RNA — carries genetic code from nucleus to ribosomes
<b>Codon</b>	Three mRNA bases coding for one specific amino acid

■ EXAM TIP: A pairs with T. C pairs with G. If 20 C bases, there are 20 G bases. Complementary base pairing is tested in calculation questions.