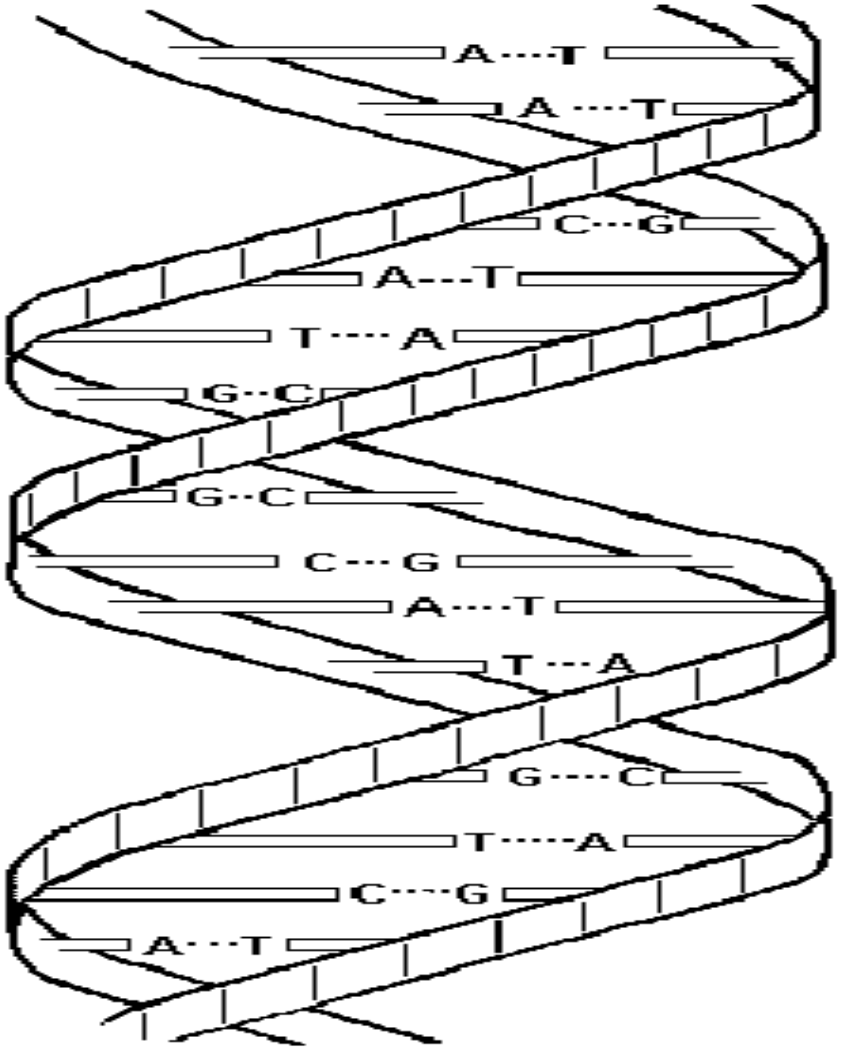
FS MARCH TEST (90) / 75%

Life Sciences



1. **DNA and PROTEIN SYNTHESIS**
2. **MEIOSIS**
3. **ANIMAL REPRODUCTION**
4. **HUMAN REPRODUCTION**

Key Concepts: Code of Life - MARCH TEST

- **TERMINOLOGY**
- **Discovery of DNA – Franklin & Wilkins; Watson & Crick**
- **CALCULATE nr of G, C, A, T in a DNA MOLECULE**

- **DNA vs RNA**
- **DNA REPLICATION –** Why, When, How

- **DNA PROFILES**

- **PROTEIN SYNTHESIS**

DNA: The Code of Life

How do the following concepts relate?

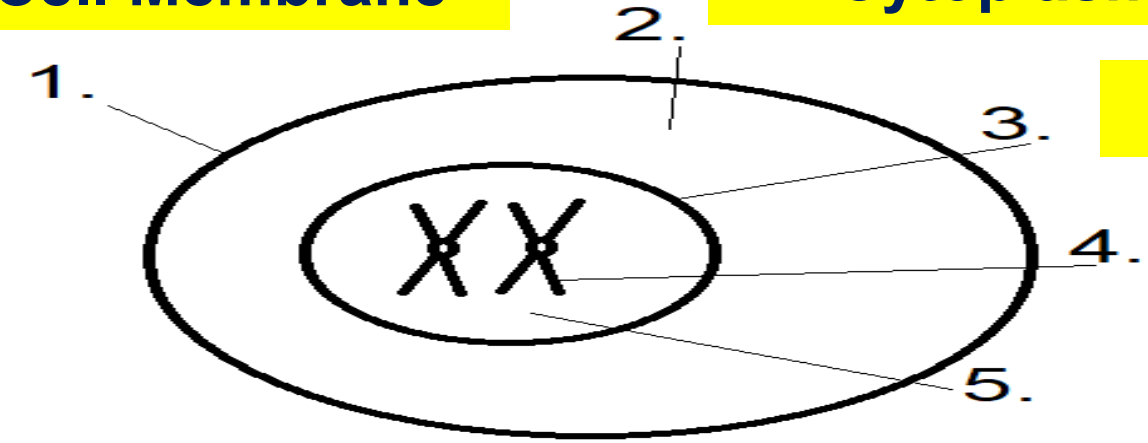
- Cell
- Nucleus
- Chromosomes
- Chromatids
- DNA
- Nucleotides
- Genes

DNA: THE CODE OF LIFE

Cell Membrane

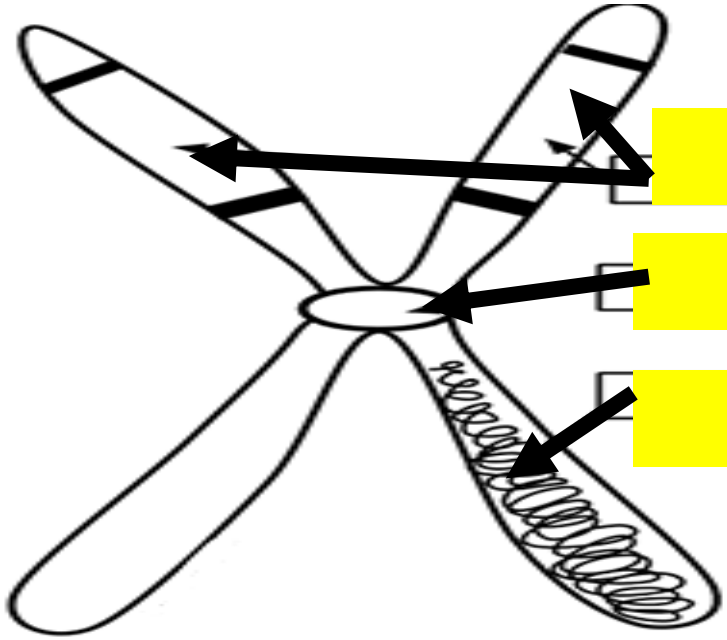
Cytoplasm

Centrosome contains two Centrioles



Nucleus

Chromosome

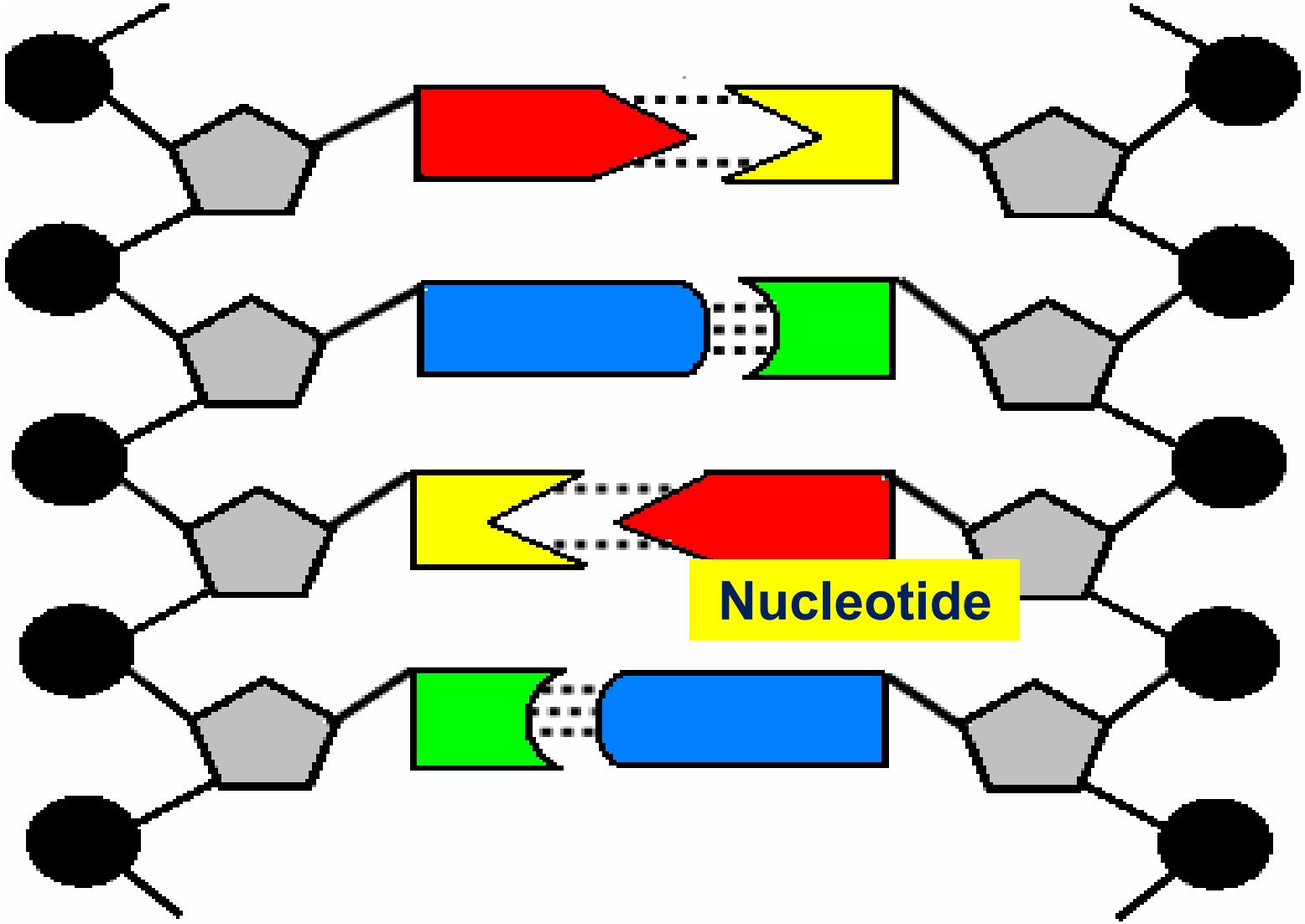


Chromatids

Centromere

DNA

DNA:THE CODE OF LIFE



QUESTION

A DNA Molecule has 180 Nitrogenous Bases. If 20% of the bases are Thymine, calculate how many Guanine bases are present in the molecule.

ANSWER

T is 20% ; A is 20%. Together 40%

C and G together are 60%

G is 30%

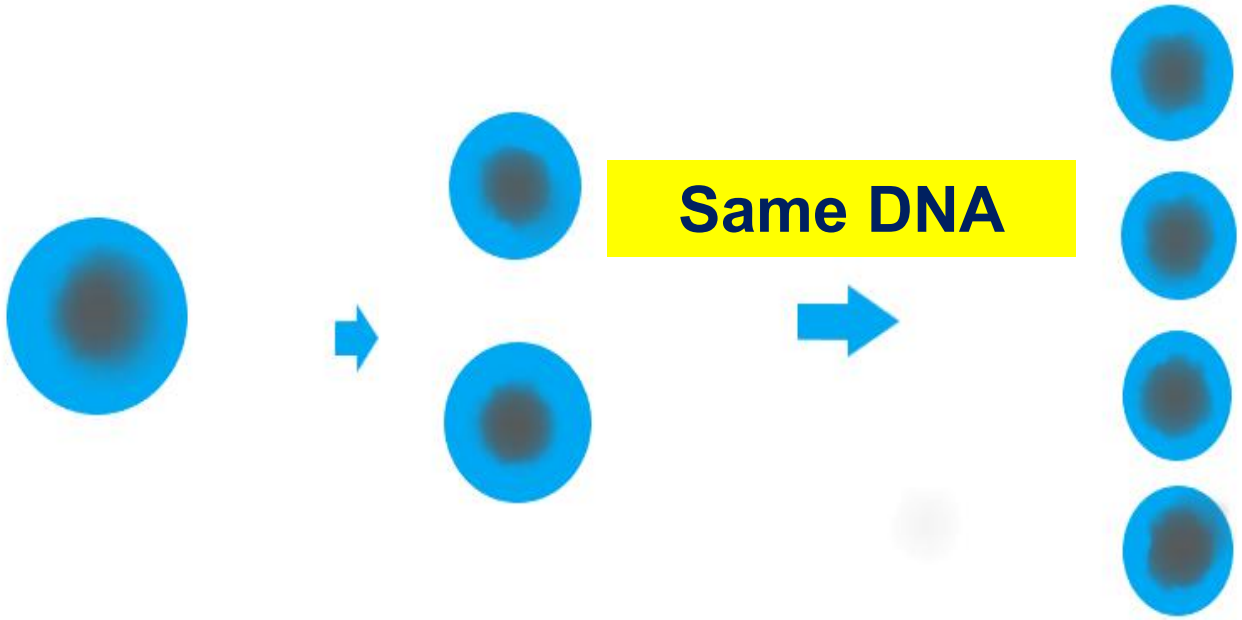
$$\frac{30}{100} \times 180 = 54 \text{ Guanine bases}$$

DNA: THE CODE OF LIFE

DNA REPLICATION

Why? Where?

When?



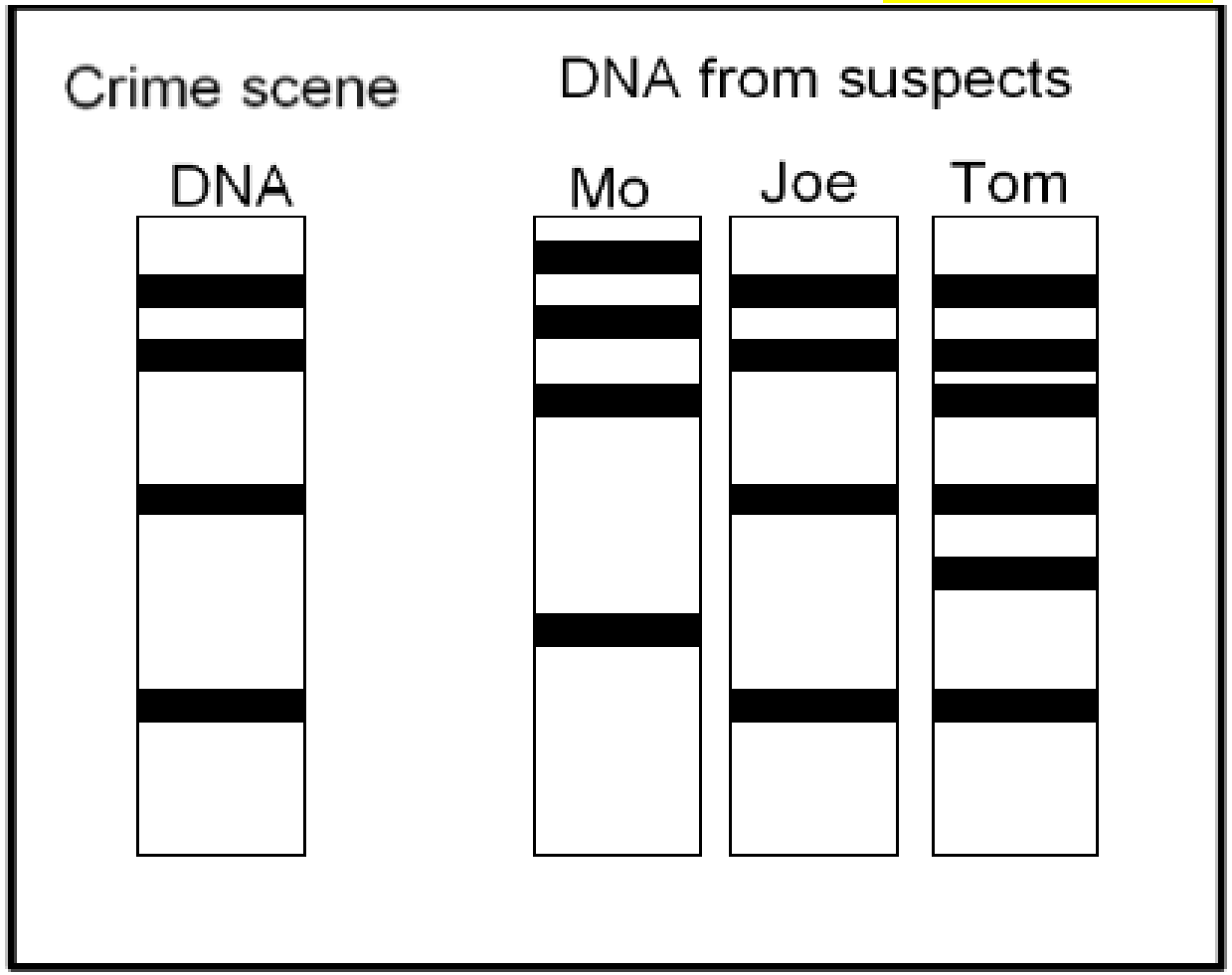
DNA: THE CODE OF LIFE

DNA	RNA
Double strand	Single strand
Deoxyribose sugar	Ribose sugar
Thymine	Thymine replaced by **Uracil**

Full Sentences, Explain

DNA: THE CODE OF LIFE

DNA PROFILE: sources?



USES OF DNA PROFILES

1. Identify suspects in criminal investigations. (Not solve the crime)
2. Determine compatibility of tissues for organ transplant.
3. Identify missing people. (Not finding missing people)

Key Concepts: Code of Life

How do the following concepts relate

- Cell
- Nucleus
- Chromosomes
- Chromatids
- DNA
- Nucleotides
- Genes
- **DNA vs RNA**
- **DNA REPLICATION –** Why, When, How
- **DNA PROFILES**
- **PROTEIN SYNTHESIS**