

Name: .....

Class: .....



A scientist obtained a mass of 0.0062 nanograms of DNA from a diploid human cell. Calculate the mass of DNA the scientist should obtain from a haploid human cell.

$$0.0062 \div 2 = 0.0031$$

$$0.0031 \times 1000 = 3.1 \text{ (picograms)}$$

3.1 picograms

What is the name of the domain that plants belong to?

- A** Eukarya  
 B Archaea  
 C Monera  
 D Protista

Bacterial cells contain plasmids. Describe **two** other features of a bacterial cell.

An answer including **two** of the following:

- No nucleus /chromosomal DNA
- Cell wall.
- Flagellum.
- Presence of ribosomes.
- No membrane bound organelles / no mitochondria.

Mitosis and meiosis are processes that produce new cells.

Compare the outcomes of mitosis and meiosis.

Any **three** from:

- Mitosis produces 2 cells and meiosis produces 4 cells.
- Mitosis produces genetically identical cells/ meiosis produces genetically different cells.
- Mitosis produces diploid cells and meiosis produces haploid cells.
- Mitosis produces body cells and meiosis produces gametes /sex cells.

Plant cells contain chloroplasts. What happens in a chloroplast?

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>A</b> Oxygen produced         | Sunlight absorbed by chlorophyll  |
| <b>B</b> Carbon dioxide produced | Sunlight absorbed by mitochondria |
| <b>C</b> Oxygen produced         | Sunlight absorbed by mitochondria |
| <b>D</b> Carbon dioxide produced | Sunlight absorbed by chlorophyll  |

In which tube are photosynthesis and respiration taking place at the same time?

