



Science Worksheet #1

Genetic Material

Name: **_Answer Key**

Grade **8** ()

Date: **/9/2022**

1 – Choose the correct answer.

Why is DNA important?

- a- It is very small and very complicated.
- b- It is in everything.
- c- **It is the blueprint for traits of all living things.**
- d- We eat it every day for energy.



Which of the following units are repeatedly joined together to form a strand of DNA?

- a- Amino acids
- b- **Nucleotides**
- c- Sugars
- d- Lipids

In a molecule of double stranded DNA, the amount of Adenine present is always equal to the amount of

- a- Guanine
- b- Cytosine
- c- **Thymine**
- d- Uracil

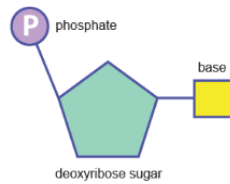
Guanine bonds with

- a- Adenine
- b- Thymine
- c- Uracil
- d- **Cytosine**

What determines the code, or information, of a DNA molecule?

- a- The structure of nitrogen bases
- b- **The order of nitrogen bases**
- c- The colour of nitrogen bases
- d- The number of nitrogen bases

Name this structure



- a- Double helix
b- **Nucleotide**
c- Hydrogen bond
d- Gene

In a certain gene, 15% of the DNA is Thymine. How much Adenine will you find in the complementary strand?

- a- **15%**
b- 35%
c- 30%
d- 70%

In order for DNA replication to happen, which bonds need to be broken?

- a- Bonds between the sugar and phosphate
b- **Bonds between the nitrogen bases**
c- Bonds between sugar and nitrogen base
d- Bonds between phosphates

DNA replication occurs

- a- Before Mitosis
b- Before Meiosis
c- Before binary fission
d- **a,b and c**

Given the following sequence – GAC ATT CAA GTA

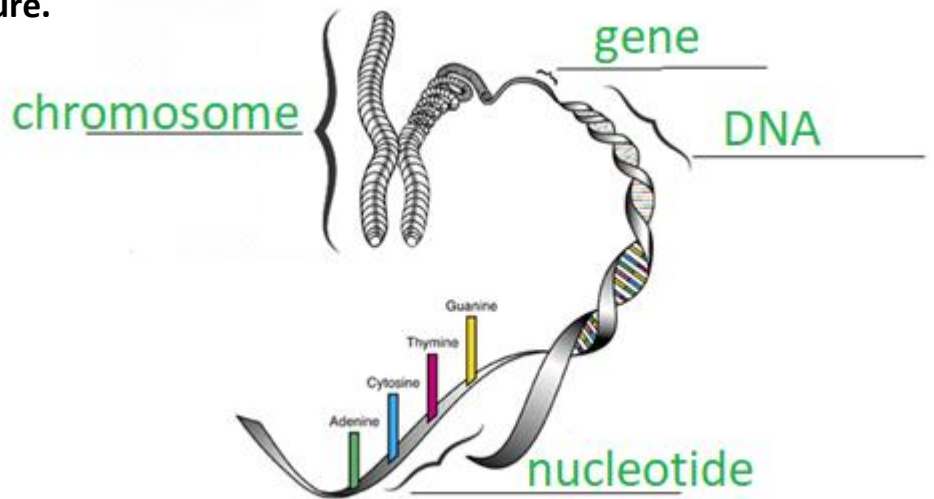
The complementary sequence would be....

- a- GAC ATT CAA GTA
b- ATG AAC TTA CAG
c- **CTG TAA GTT CAT**
d- CAT GTT AAT CAG

In replication, _____ is used to make more _____

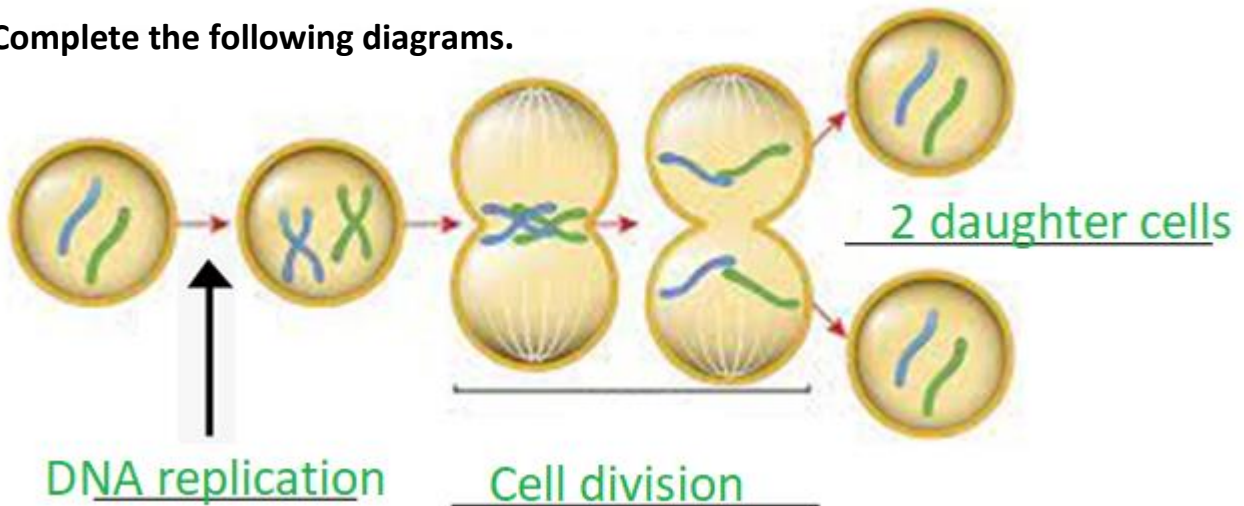
- a- RNA, DNA
b- DNA, RNA
c- **DNA, DNA**
d- DNA, Protein

2- Label the following structure.



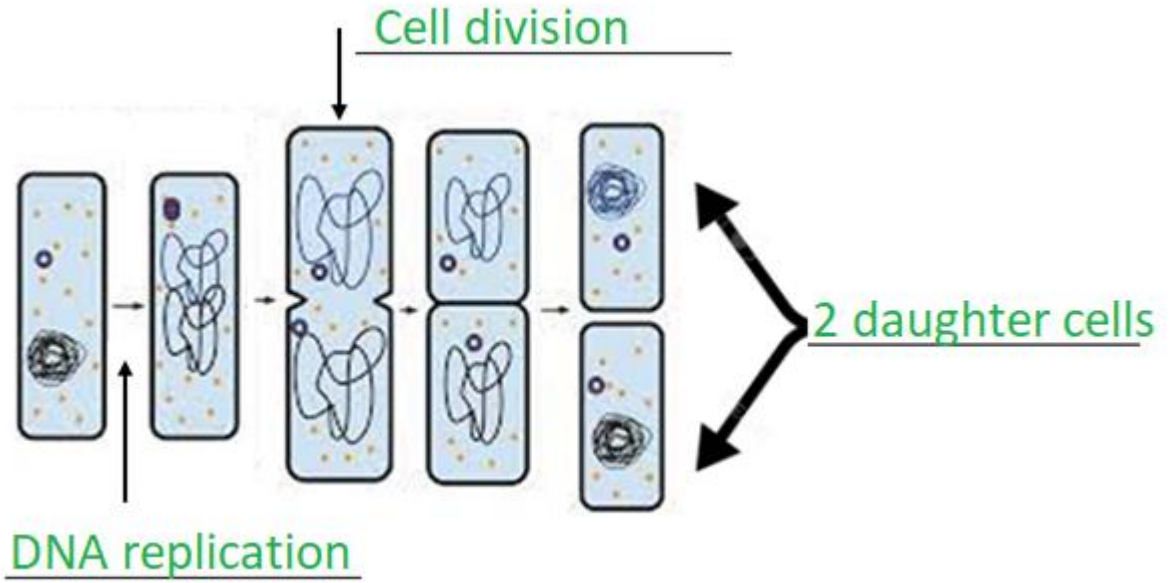
The structure above is found in the nucleus

3- Complete the following diagrams.



This diagram shows the stages of Mitosis. Support your answer with an evidence.

Daughter cells have the same number of chromosomes as the mother cell.



This diagram shows the stages of **Binary Fission**_. This process is required for **Bacterial reproduction**_____ .