1. A gene is:

   ☐ a whole chromosome made of DNA

   ☐ a type of cell that divides

   ☐ a sugar in the DNA backbone

   ☐ a section of DNA that codes for a protein

2. Which amino acid did Nirenberg's all-U message make?

   ☐ Haemoglobin

   ☐ Phenylalanine

   ☐ Glucose

   ☐ Glycogen

3. Mitosis produces daughter cells that are:

   ☐ half the chromosome number

   ☐ gametes

   ☐ all different

   ☐ genetically identical to the parent

4. Meiosis produces how many cells from one parent cell?

   ☐ four

   ☐ two

   ☐ eight

   ☐ one

5. An allele is:

   ☐ a whole chromosome

   ☐ a protein

   ☐ a cell

   ☐ a version of a gene

6. Mendel counted 5,474 round and 1,850 wrinkled seeds. What is round ÷ wrinkled, to 2 decimal places?

   _____

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☐ True ☐ False

8. How many chromosomes are in a human body cell?

   _____

9. A gene is a length of DNA that codes for one protein.

   ☐ True ☐ False

10. Mitosis is used for: (Select all that apply.)

    ☐ asexual reproduction

    ☐ growth

    ☐ making gametes

    ☐ repair of tissue

    Tick every correct option.

1. **a section of DNA that codes for a protein**

   A gene codes for one protein.

2. **Phenylalanine**

   The first code word read.

3. **genetically identical to the parent**

   Mitosis makes identical copies.

4. **four**

   Meiosis makes four gametes.

5. **a version of a gene**

   Alleles are different versions of a gene.

6. **2.96**

   Very close to 3:1.

7. **False**

   False. Males have only one X chromosome, so a single recessive allele is expressed; females need two copies. These conditions affect males more often.

8. **46**

   Body cells have 46 chromosomes (23 pairs).

9. **True**

   The definition.

10. **asexual reproduction; growth; repair of tissue**

    Gametes are made by meiosis, not mitosis.

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