

## 9 Science (10FI)

### Meiosis questions

1. How many divisions are there in meiosis? How many divisions are in mitosis?

Meiosis has 2 divisions and mitosis has 1 division.

2. Which cells go through meiosis? Which cells go through mitosis?

Reproductive cells go through meiosis to produce eggs and sperm. All other body cells go through mitosis to allow your tissues to repair and grow.

3. Human cells start with 46 chromosomes. How many will they have at the end of meiosis? How many will they have at the end of mitosis?

Human cells have 23 chromosomes at the end of meiosis and 46 chromosomes at the end of mitosis.

4. Why is meiosis important? (think about what the cells made through meiosis do)

You want eggs and cells to have only half of the total genetic material so when they combine, they will make a cell with one full set of chromosomes.

5. A dog has 78 chromosomes. How many will it have at the end of meiosis? How many will it have at the end of mitosis?

A dog's cell will have 39 chromosomes at the end of meiosis and 78 chromosomes at the end of mitosis.

6. Think about the potato we planted (and the seeds you may have planted last week) which process is used to grow from a seed or a potato into a full-grown plant?

Mitosis is used to make new cells that allow an organism to grow. These cells will have the same number of chromosomes as the cell that divided to make them.