

Chapter review questions

- 1 sperm and ova
- 2 gametes
- 3 23 pairs, or 46
- 4 pollen and ova
- 5 one at the beginning and two at the end
- 6 Embryonic stem cells can differentiate into any type of cell and adult stem cells can't.
- 7 any two from: sperm cell, nerve cell, muscle cell
- 8 bone marrow, lipid or fat cells, blood
- 9 lizard, starfish
- 10 An organism produced asexually that has identical genetics to its parent.
- 11 They have the same genes as their one parent.
- 12 Any cells except for sperm and ova
- 13 23
- 14 eggs
- 15 46
- 16 A section of a chromosome made from DNA that carries the code to make a protein.
- 17 Alleles are two versions of a gene, with each allele coming from a different parent.
- 18 Chromosomes shorten and fatten. They then copy themselves. Then they line up in the middle of the cell, before half of the chromosomes are pulled to each end. Finally the cell splits into two daughter cells.
- 19 growth and repair
- 20 one
- 21 Because they have half the DNA of each parent and come together to form the one diploid set of DNA of a new organism.
- 22 There is no variation; daughter cells are identical.
- 23 The process of a stem cell turning into a specialised cell.
- 24 Describes a stem cell capable of growing into any specialised cell found in the adult organism.
- 25 Describes a stem cell capable of growing into several types of specialised cell found in the adult organism (but not any specialised cell).
- 26 meristem
- 27 any two from: root hair, xylem and phloem
- 28 A small section of stem usually with a few leaves is removed. This is often dipped into rooting powder which contains plant hormones to speed up differentiation. This cutting is then placed directly into the soil.

- 29 Plant hormones are present in rooting powder. Cuttings are dipped into this before being planted. This helps roots form from stem tissue.
- 30 They believe that an embryo is a life.
- 31 A medical procedure in which ova are fertilised outside of a woman, then placed into her uterus to develop into a baby.
- 32 One comes from each parent.
- 33 A chromatid is a copy of a chromosomes made during mitosis.
- 34 A chromatid is a copy of a chromosome.