

17.2. MITOSIS

01. 0610_s16_qp_23 Q: 31

Which structures in plant cells build protein molecules under the control of the nucleus?

- A cell walls
 - B chloroplasts
 - C mitochondria
 - D ribosomes
-

17.2 Mitosis

02. 0610_m22_qp_22 Q: 32

What happens to the mass of DNA in a nucleus before mitosis occurs?

- A It doubles.
 - B It halves.
 - C It stays the same.
 - D It halves and then halves again.
-

03. 0610_s21_qp_22 Q: 33

Some statements about mitosis are listed.

- 1 Cells divide and produce new cells to repair damaged tissues.
- 2 Chromosomes are duplicated and the cell separates to form gametes.
- 3 Chromosomes are duplicated and the cell separates to form genetically identical cells.
- 4 Mitosis is used in asexual reproduction.

Which statements are correct?

- A 1, 2 and 3 B 1, 3 and 4 C 2 and 4 D 3 and 4 only
-

04. 0610_s21_qp_23 Q: 33

Which definition of mitosis is correct?

- A nuclear division giving rise to genetically different cells
 - B nuclear division giving rise to genetically identical cells
 - C fusion of nuclei giving rise to a genetically different cell
 - D fusion of nuclei giving rise to a genetically identical cell
-

05. 0610_m20_qp_22 Q: 33

Which row shows the features of stem cells?

	type of cell	type of cell division involved
A	specialised	meiosis
B	specialised	mitosis
C	unspecialised	meiosis
D	unspecialised	mitosis

06. 0610_s20_qp_21 Q: 32

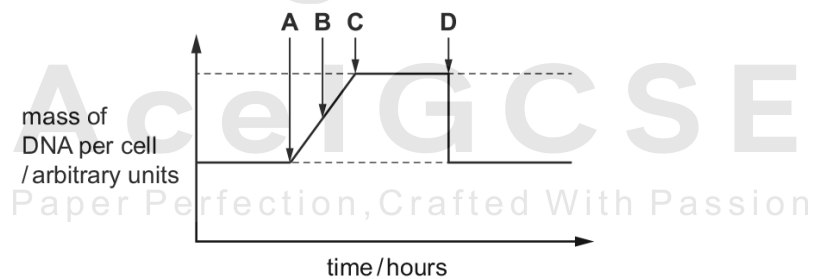
When damaged tissues are repaired cells undergo division by

- A** meiosis to produce genetically identical cells.
- B** meiosis to produce genetically different cells.
- C** mitosis to produce genetically identical cells.
- D** mitosis to produce genetically different cells.

07. 0610_w20_qp_21 Q: 30

The graph shows how the mass of DNA changes during a mitotic cell division.

Where on the graph are two cells formed?

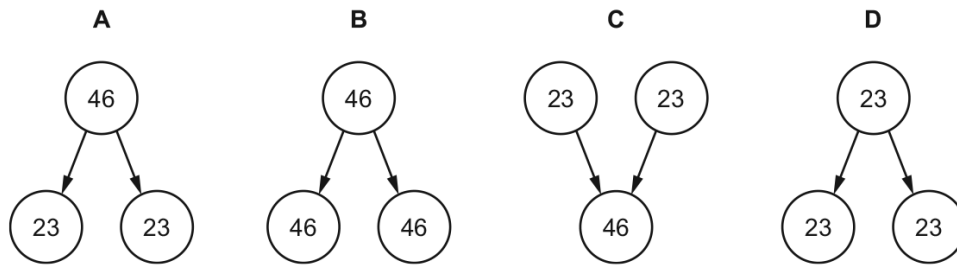


17.2. MITOSIS

08. 0610_w20_qp_22 Q: 30

The diagrams show human nuclei and the number of chromosomes in each nucleus.

Which diagram represents nuclear division of skin cells for growth and repair?



09. 0610_m19_qp_22 Q: 31

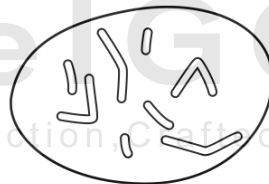
What happens as a result of mitosis?

	genetically identical cells produced	chromosome number is halved
A	✓	✓
B	✓	x
C	x	✓
D	x	x

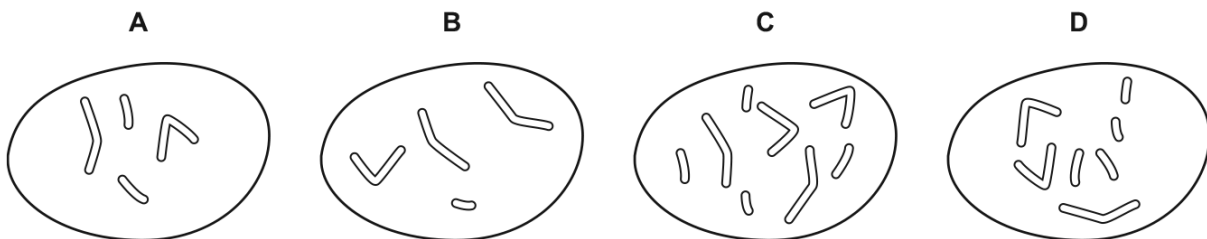
key
 ✓ = yes
 x = no

10. 0610_s19_qp_21 Q: 32

The diagram shows the chromosomes in the nucleus of a cell that divides by mitosis.

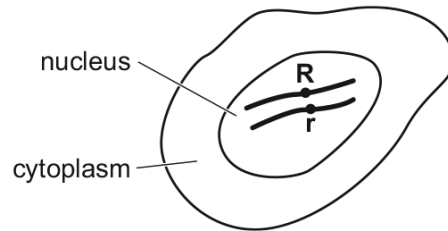


Which diagram shows the chromosomes in the nucleus of one of the daughter cells produced?



11. 0610_w19_qp_21 Q: 31

The diagram shows a diploid cell and alleles **R** and **r** on one pair of chromosomes.



When this cell divides by mitosis, which daughter cells will be produced?

	chromosome number	genotype
A	diploid	heterozygous
B	diploid	homozygous
C	haploid	heterozygous
D	haploid	homozygous

12. 0610_m18_qp_22 Q: 27

Cell division has the following functions.

- 1 asexual reproduction
- 2 growth
- 3 production of gametes
- 4 repair of damaged tissue
- 5 replacement of cells

Which functions are specific to mitosis?

- A** 1, 2, 3 and 4
- B** 1, 2, 4 and 5
- C** 2, 3 and 4 only
- D** 3, 4 and 5 only

17.2. MITOSIS

13. 0610_s18_qp_22 Q: 31

The mitotic index of a tissue is the percentage of cells in a tissue that are undergoing division.

The table shows the number of cells in two tissue samples, X and Y.

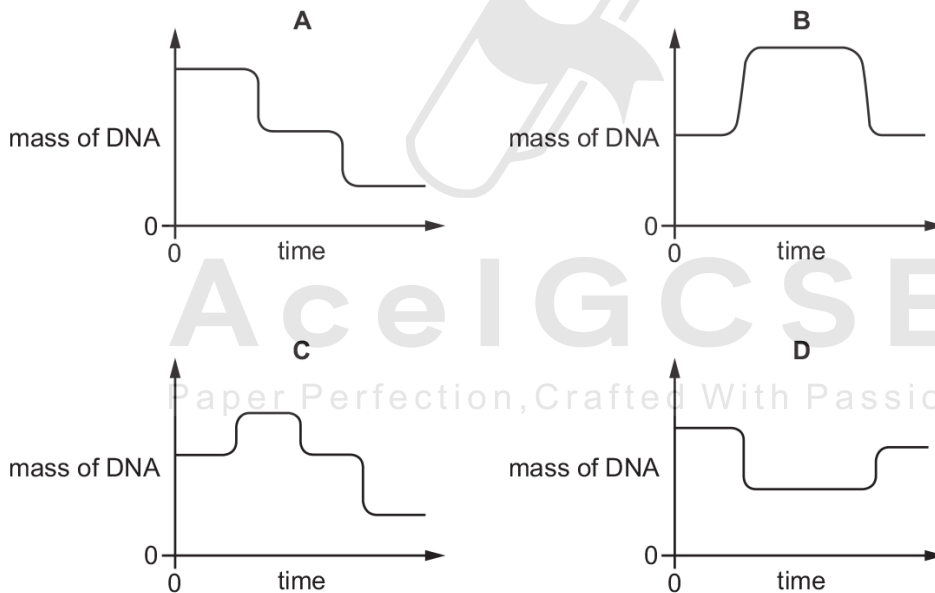
tissue sample	number of cells undergoing mitosis	number of cells not undergoing mitosis	total number of cells in the tissue sample
X	25	55	80
Y	15	95	110

Which statement is correct?

- A Tissue X is growing faster with a mitotic index of 31.3%.
- B Tissue X is growing faster with a mitotic index of 45.4%.
- C Tissue Y is growing faster with a mitotic index of 13.6%.
- D Tissue Y is growing faster with a mitotic index of 15.8%.

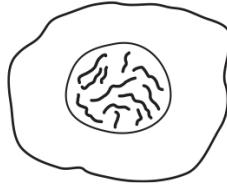
14. 0610_s18_qp_23 Q: 31

Which graph shows the correct change in mass of DNA in one cell during cell division by mitosis?



15. 0610_w18_qp_22 Q: 31

The diagram shows a cell of an organism. The nucleus contains 12 chromosomes.



After it divides by mitosis, how many chromosomes would be present in one of the daughter cells?

- A** 6 **B** 12 **C** 18 **D** 24
-

16. 0610_m17_qp_22 Q: 30

A cell with 16 chromosomes divides twice by mitosis.

How many chromosomes does each of the resulting cells contain?

- A** 4 **B** 8 **C** 16 **D** 32
-

17. 0610_s17_qp_21 Q: 32

What are stem cells?

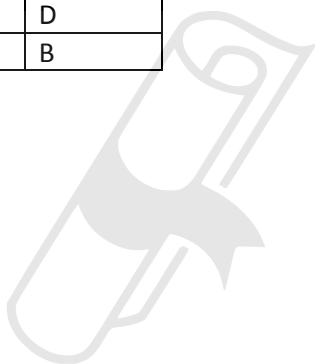
- A** specialised cells that divide by meiosis to produce daughter cells
 - B** specialised cells that divide by mitosis to produce daughter cells
 - C** unspecialised cells that divide by meiosis to produce daughter cells
 - D** unspecialised cells that divide by mitosis to produce daughter cells
-

18. 0610_s16_qp_21 Q: 31

What happens to the chromosome number after meiosis and after mitosis?

	meiosis	mitosis
A	halved	halved
B	halved	stays the same
C	stays the same	halved
D	stays the same	stays the same

SN	Paper	Q. No.	Answer
01	0610_s16_qp_23	31	D
02	0610_m22_qp_22	32	A
03	0610_s21_qp_22	33	B
04	0610_s21_qp_23	33	B
05	0610_m20_qp_22	33	D
06	0610_s20_qp_21	32	C
07	0610_w20_qp_21	30	D
08	0610_w20_qp_22	30	B
09	0610_m19_qp_22	31	B
10	0610_s19_qp_21	32	C
11	0610_w19_qp_21	31	A
12	0610_m18_qp_22	27	B
13	0610_s18_qp_22	31	A
14	0610_s18_qp_23	31	B
15	0610_w18_qp_22	31	B
16	0610_m17_qp_22	30	C
17	0610_s17_qp_21	32	D
18	0610_s16_qp_21	31	B



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