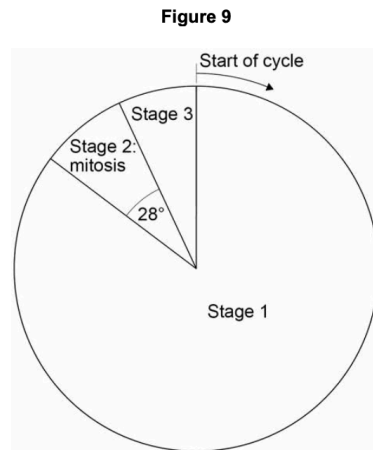


Cell division – mitosis

Q1. (2018)

Embryonic stem cells divide by mitosis.

Figure 9 represents a cell cycle for a human embryonic stem cell.

0 6 . 3 The mass of DNA in the cell at the start of the cycle is 6 picograms.

A picogram is 10^{-3} nanograms.

Convert 6 picograms to grams.

Give your answer in standard form.

[1 mark]

Mass = _____ g

Q2. (2018)

0 6 . 4 The time taken for this complete cell cycle is 15 hours.

Calculate how many hours the cell spent in mitosis.

Give your answer to 3 significant figures.

[2 marks]

Time spent in mitosis = _____ hours

Q3. (2018)

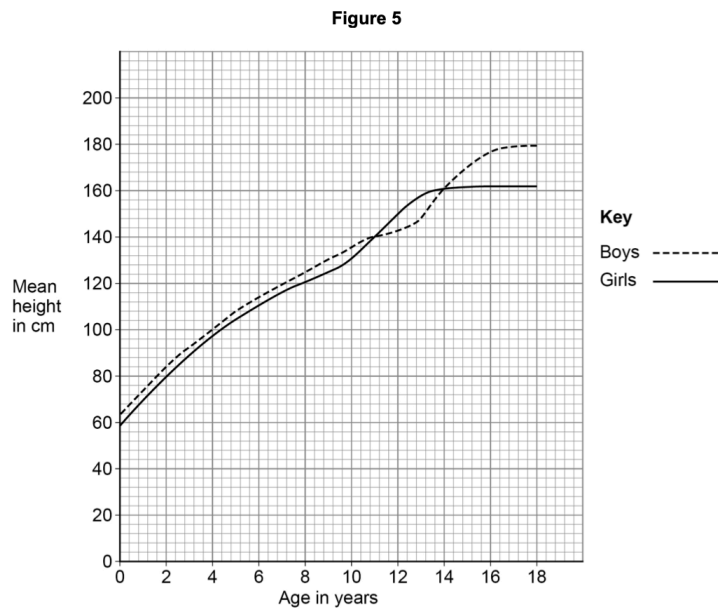
0 6 . 5 Describe what happens in each of the three stages of the cell cycle.

[5 marks]

Q4. (2022)

Cell division is important in the growth of multicellular organisms.

0 2 . 6 **Figure 5** shows the mean height of boys and of girls from birth to age 18 years.



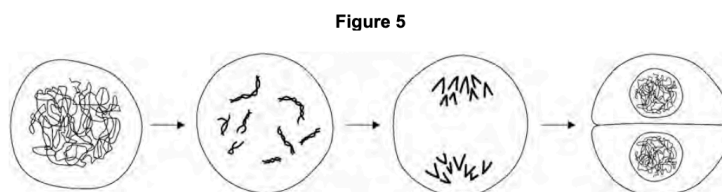
Compare the growth of boys with the growth of girls.

Use data from **Figure 5** in your answer.

[6 marks]

Q5. (2024)

0 6 . 1 **Figure 5** shows a lung cell dividing.



Describe the process of the cell cycle shown in **Figure 5**.

[4 marks]