

### Cellular Energy & Cell Growth and Division Review

1. Drag & drop the parts of the formula for photosynthesis in the correct order in the space below:

**Sugars + Oxygen**      **carbon dioxide + water + sunlight** →

2. What major process occurs in plants that provide us with glucose and oxygen?
3. Put the descriptions in the correct place on the following chart:

Process	Location	Function	Reactants/Inputs	Products/Outputs
Photosynthesis			Carbon dioxide and water	
Respiration			Glucose & oxygen	

-Chloroplast

-Carbon dioxide and water

-Energy release

-Mitochondria

-Energy capture

-Glucose and oxygen

4. Use the chart above to answer the following questions:

- Where does respiration take place?

What is its function?

What are the reactants of respiration?

What are the products?

-Where does photosynthesis take place?

What is its function?

What are the reactants of photosynthesis?

What are the products?

5. What does chlorophyll do for plants?

6. In which process is energy stored?

In which process is energy released?

7. What is the first step of cellular respiration?

8. What is the goal of photosynthesis?

Where do plants get most of their energy from?

9. Explain the difference between photosynthesis and cellular respiration.

10. Analyze the following diagram and answer the questions that follow:

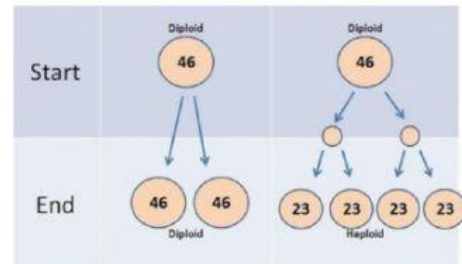
Process A.

Process B.

- Which process is Meiosis? How can you tell?

- Which process is Mitosis? How can you tell?

- What is the end result of Meiosis?

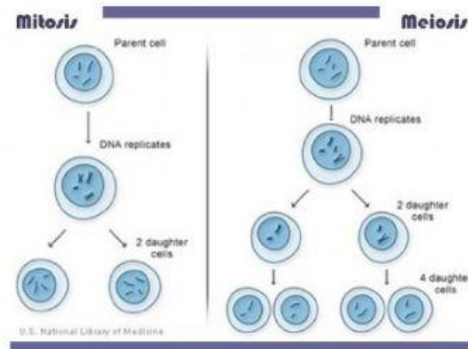


- What is the end result of Mitosis?

Which process increases genetic diversity?

11. If a parent cell has 36 chromosomes, how many chromosomes will be in the daughter cells after mitosis? Meiosis?

12. Analyze the following diagram to answer the questions that follow:



- What do mitosis and meiosis have in common? (LOOK AT THE CHART!)

- Which process reproduces sexually?

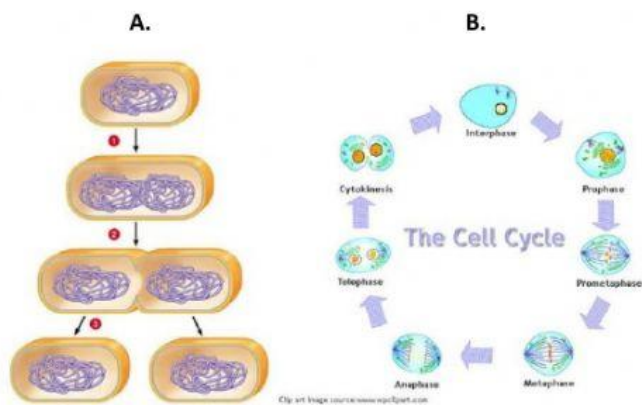
Which process reproduces asexually?

- Which process creates genetically identical daughter cells?

- Which process leads to more genetic variety?

- Explain why crossing over during meiosis is so important to the survival of a species.

- If a cell has 20 chromosomes before binary fission and mitosis, how many chromosomes will it have in its two daughter cells?



Use the diagram above to answer the following questions

13. Which diagram represents Mitosis? Which diagram represents Binary fission?
14. What types of organisms does binary fission occur in?
15. What types of organisms does mitosis occur in?
16. How does mitosis maintain genetic continuity? How does binary fission maintain genetic continuity?
17. How are binary fission and mitosis similar? How are binary fission and mitosis different?