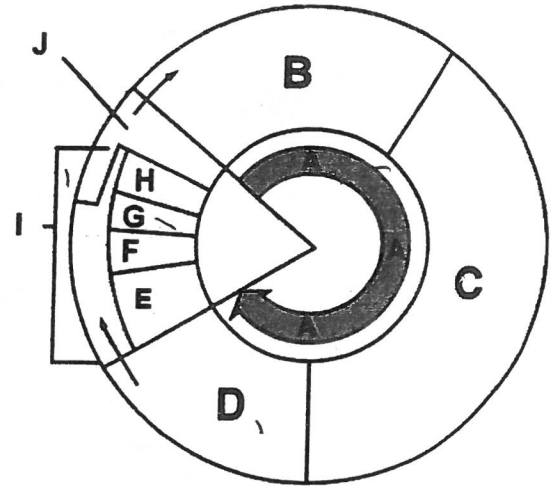


Using the labeled Cell Cycle diagram to the right do the following:

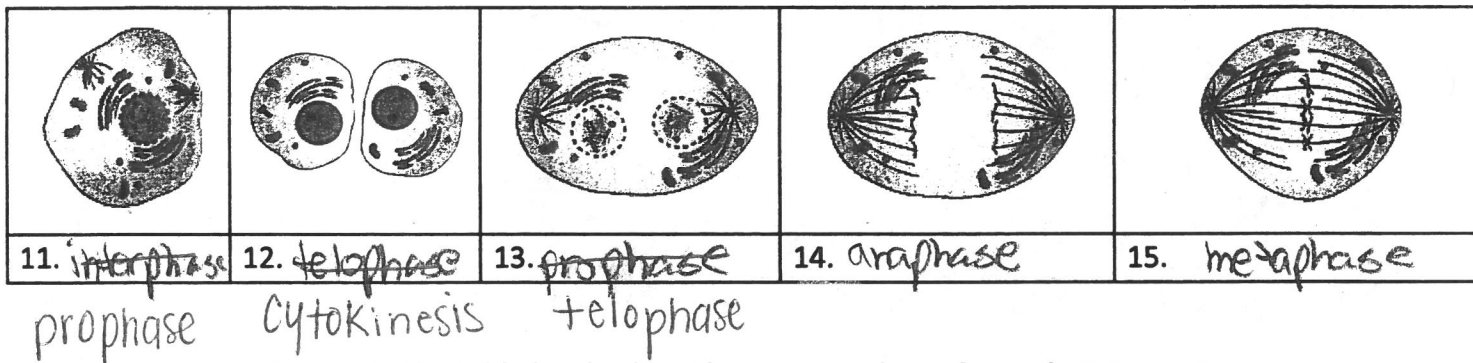
Left column: place the corresponding letter for the correct stage/phase

Right column: Complete the description of the stage/phase



1. A	<u>Interphase</u> : Consists of G ₁ , S and G ₂ phases in the Cell Cycle.
2. <u>J</u>	Cytokinesis – division of the cytoplasm resulting in two identical <u>daughter</u> cells.
3. <u>B</u>	G ₁ – <u>growth</u> phase: Makes organelles and proteins needed for replication of DNA. Also contains a G ₁ checkpoint . If everything is correct, cell will proceed to S phase.
4. <u>E</u>	Prophase : chromatin condenses to become chromatids , nuclear envelopes break down, and <u>centrioles</u> migrate to opposite poles in animal cells. Nucleolus disappears.
5. D	G ₂ - growth phase : Cell gets ready to undergo M <u>mitosis</u> phase . Also contains a G ₂ checkpoint. If DNA replication is correct, checkpoint allows cell to enter M phase.
6. <u>C</u>	S phase : DNA is <u>replication</u> or synthesized. replicated
7. G	<u>anaphase</u> : sister chromatids separate and move to opposite sides of the cell. The <u>spindler</u> a <u>fibers</u> pulls them apart. This phase ends when the chromatids stop moving.
8. <u>F</u>	<u>metaphase</u> : sister chromatids line up along the equator in the middle. Spindle apparatus attaches at the centromere of the chromosomes.
9. <u>H</u>	Telophase : two nuclear envelopes begin reforming. Chromatids relax, uncoil & are now chromatin. Cytokinesis is occurring during Telophase but it is NOT considered a part of mitosis because it does not involve the nucleus of the cell. In plant cells, a cell plate begins to form while a <u>chromosome</u> <u>fibers</u> is visible in animal cells. furrow cleavage
10. <u>I</u>	Mitosis : division of a cell's nucleus. Occurs in this order: prophase, <u>metaphase</u> , <u>anaphase</u> , and telophase.

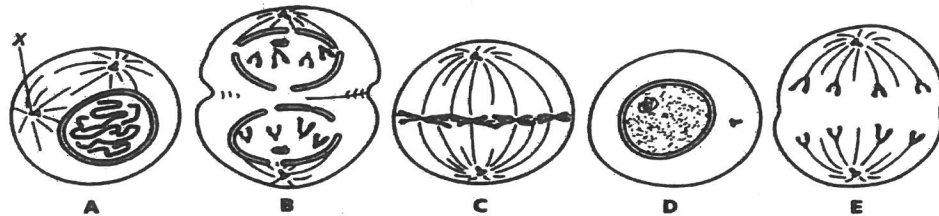
Label the pictures below:



Complete the table by checking the correct column for each statement.

Statement	Interphase	Mitosis
16. Cell growth occurs	X	✓
17. Nuclear division occurs		✓
18. Chromosomes are duplicated	✓	
19. Where cells spend most of their life	✓	

Use the following illustrations for questions 20-24



20. In cell A, what is the structure labeled X? chromosome centrioles
21. Sequence the five diagrams in chronological order from first to last. D, A, C, E, B
22. Chromosomes move to the middle of the cell during which phase? metaphase
23. During which phase do chromosomes first become visible? prophase
24. If a cell has 46 chromosomes, how many chromosomes will each daughter cell have after mitosis? 23 46

Identify the stage of mitosis each lettered plant cell is in:

25.	A	<u>Interphase or</u>
26.	B	<u>anaphase</u>
27.	C	<u>anaphase</u>
28.	D	<u>telophase</u>
29.	E	<u>prophase</u>

