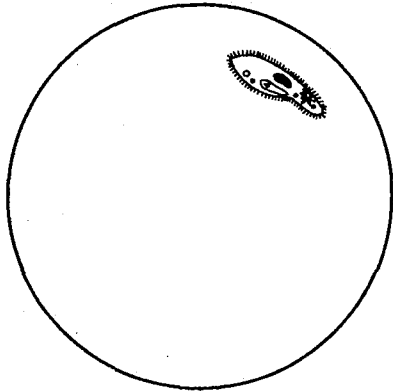


Microscope Practice Q's

1. A slide of human blood cells was observed in focus under the low-power objective of a compound light microscope that had clean lenses. When the microscope was switched to high power, the image was dark and fuzzy. Which parts of the microscope should be used to correct this situation?

- (1) nosepiece and coarse adjustment
- (2) diaphragm and ocular
- (3) objective and fine adjustment
- (4) diaphragm and fine adjustment

2. A cell in the field of view of a compound light microscope is shown in the diagram below.



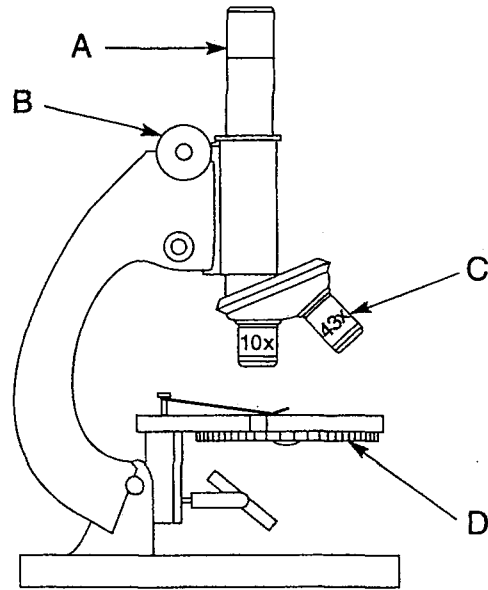
In which direction should the slide be moved to center this cell in the microscopic field?

- (1) to the right and up
- (2) to the right and down
- (3) to the left and up
- (4) to the left and down

3. A microscope with 10× and 40× objectives is used to scan a slide to locate a specimen. The largest field of vision would be provided by using the

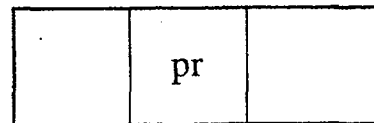
- (1) coarse adjustment
- (2) widest diaphragm opening
- (3) 10× objective
- (4) 40× objective

4. A compound light microscope is represented in the diagram below.



Which microscope part is correctly paired with its function?









- (1) A – magnifies the image of the specimen
 - (2) B – used for focusing only when the high-power objective is used
 - (3) C – provides the field of view with the largest diameter
 - (4) D – holds the specimen on the stage
5. A prepared slide was placed on the stage of a compound microscope so that the slide faced the student, as shown in the diagram below.



Which image will the student most likely observe with the low-power objective?

- (1) **rq**
- (2) **rl**
- (3) **qr**
- (4) **rd**

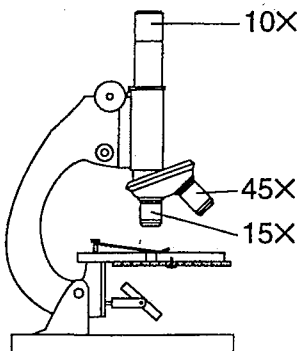
6. The table below shows the position of slides of the letter "e" on the stages of four microscopes. The image of the "e" as seen using each microscope is also shown.

	Microscope A	Microscope B	Microscope C	Microscope D
Position of slide on the stage				
Image of specimen as seen using the microscope				

Which letters correctly identify the microscopes most likely used to provide the information in the table?

- (1) *A* and *D* — compound light microscopes; *B* and *C* — dissecting microscopes
- (2) *B* and *C* — compound light microscopes; *A* and *D* — dissecting microscopes
- (3) *C* and *D* — compound light microscopes; *A* and *B* — dissecting microscopes
- (4) *B* and *D* — compound light microscopes; *A* and *C* — dissecting microscopes

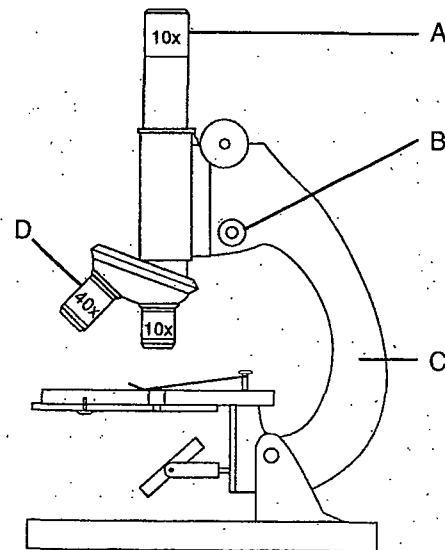
7. Base your answer to the following question on the diagram of a compound light microscope below and on your knowledge of biology.



Which parts of this compound light microscope with clean lenses should be used to improve the quality of the image being observed in the high power field of view?

- (1) ocular and high-power objective
- (2) diaphragm and fine-adjustment knob
- (3) coarse-adjustment knob and low-power objective
- (4) ocular and diaphragm

8. Base your answer to the following question on the diagram below of a microscope and on your knowledge of biology.

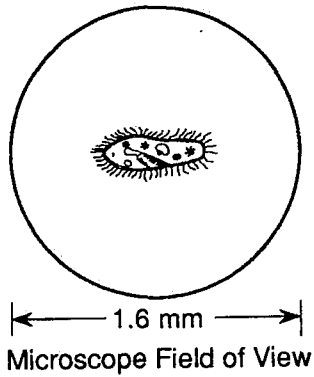


The highest possible magnification that can be obtained when using this microscope is

- (1) 40x
- (2) 100x
- (3) 400x
- (4) 4,000x

9. Base your answer to the following question on the information and diagram below and on your knowledge of biology.

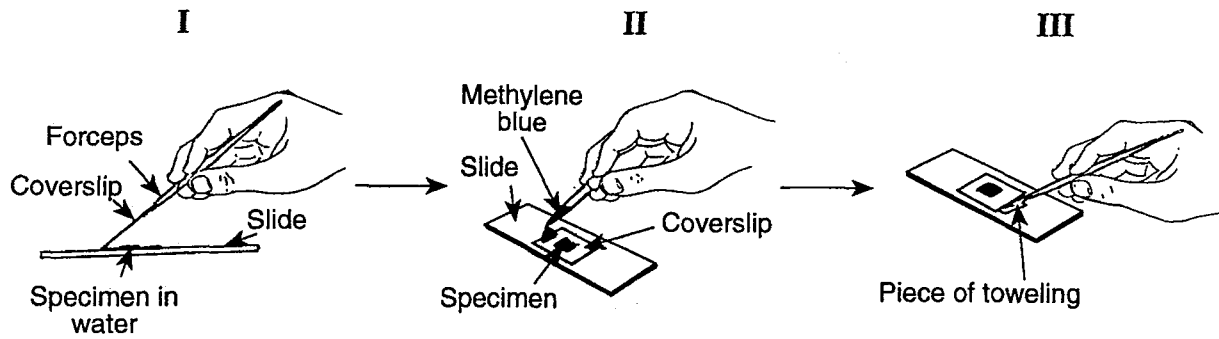
The diagram below represents a paramecium observed by a student using the low power objective (100 \times) of a compound light microscope.



What would happen if the student switched to high power (400 \times)?

- (1) The actual length of the paramecium would increase.
- (2) The image of the entire paramecium would not fit within the field of view.
- (3) The field of view would become so bright that the student would have difficulty viewing the paramecium.
- (4) The image of an entire contractile vacuole would not fit within the field of view.

10. Base your answer to the following question on the diagram below and on your knowledge of biology.



Which laboratory technique is illustrated in the diagram?

- (1) testing a specimen for amino acids
- (2) determining the pH of a specimen
- (3) measuring the photosynthetic rate in a specimen
- (4) preparing a wet mount of a specimen