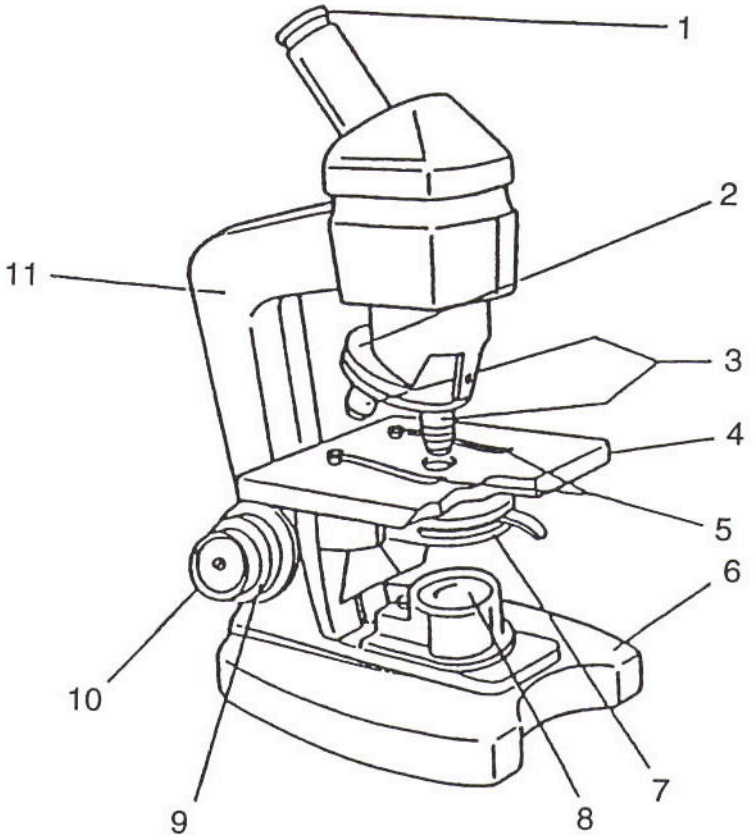
MICROSCOPY QUIZ

I. PARTS OF THE MICROSCOPE: For each of the following parts of the microscope, give the letter representing it's function and the number representing it's location.

PART	FUNCTION
__ ocular	A. holds slide in place
__ coarse adjustment	B. foundation to keep scope stable
__ fine adjustment	C. controls the amount of light to specimen
__ arm	D. supports slide and specimen
__ nosepiece	E. lens that form initial image of specimen
__ objectives	F. holds objectives - allows changing power
__ stage	G. used for initial & low power focusing
__ stage clips	H. supports ocular, objectives & body tube
__ diaphragm	I. source of light
__ illuminator	J. magnifies image formed by objective
__ base	K. used for fine tuning & high power focusing

LOCATION



II. MICROSCOPY SKILLS:

___ 1. A student prepares a slide of the letter "d" and positions the slide on the stage of the microscope so the letter is in the normal reading position. When viewed through the microscope, the image of the letter will appear as

A. d B. b C. q D. p

___ 2. An organism viewed under the microscope appears to be moving " ↖ ". The organism is actually moving

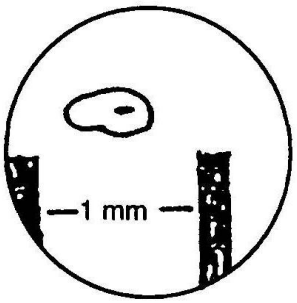
A. ↖ B. ↘ C. ↙ D. ↗

___ 3. A student observes a specimen under high (400X) power and then switches back to low (100X) power. How will the appearance of the image change when going from high power to low power?

A. larger and darker
B. smaller and darker
C. smaller and brighter
D. larger and brighter

___ 4. A microscope is equipped with a 10X ocular and two objectives - one is 10X and the other is 43X. What is the highest total magnification possible with this microscope?

Questions 5 - 9 are based upon the following diagram:



___ 5. The diagram represents a field of view through a compound light microscope. What is the diameter of the field of view in millimeters (mm)?

___ 6. What is the diameter of this field of view in micrometers (μm)?

___ 7. What is the approximate length of the organism in micrometers (μm)?

___ 8. This diagram represents the field of view under low power with a total magnification of 100X. If the high power field is 400X, what would be the diameter of the high power field in micrometers?

___ 9. When you switch from low power to high power, what happens to depth of focus?

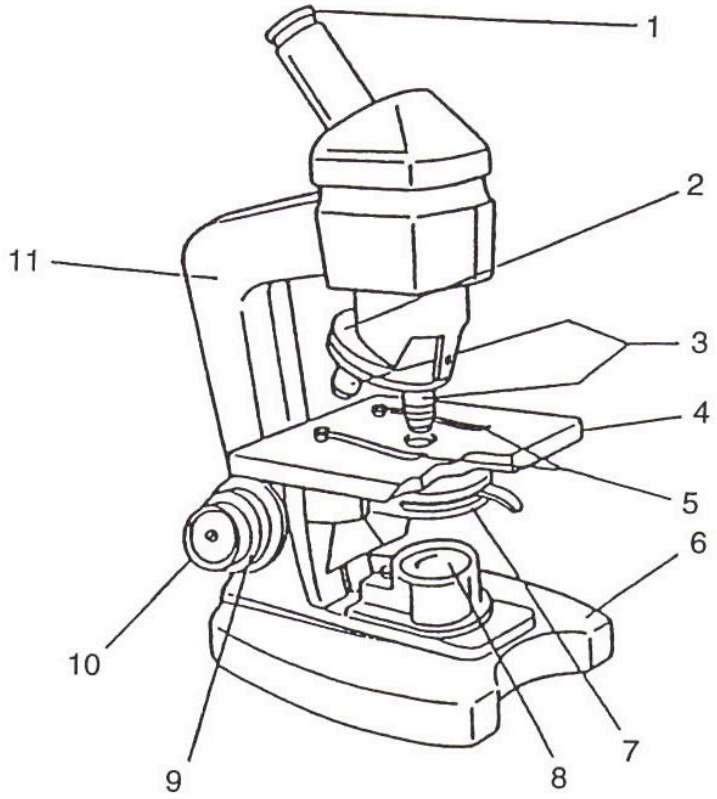
A. it will be greaterB. it will be less
C. it will remain the same D. it will be nonexistent

ANSWER KEY FOR MICROSCOPY QUIZ

I. PARTS OF THE MICROSCOPE: For each of the following parts of the microscope, give the letter representing it's function and the number representing it's location.

PART	FUNCTION
1. J ocular	A. holds slide in place
9. G coarse adjustment	B. foundation to keep scope stable
10.K fine adjustment	C. controls the amount of light to specimen
11.H arm	D. supports slide and specimen
2. F nosepiece	E. lens that forms initial image of specimen
3. E objective	F. holds objectives - allows changing power
4. D stage	G. used for initial & low power focusing
5. A stage clips	H. supports ocular, objectives & body tube
7. C diaphragm	I. source of light
8. I illuminator	J. magnifies image formed by objective
6. B base	K. used for fine tuning & high power focusing

LOCATION



II. MICROSCOPY SKILLS:

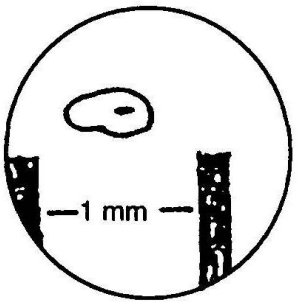
D 1. A student prepares a slide of the letter " d " and positions the slide on the stage of the microscope so the letter is in the normal reading position. When viewed through the microscope, the image of the letter will appear as
A. d B. b C. q D. p

B 2. An organism viewed under the microscope appears to be moving " ↖ ". The organism is actually moving
A. ↖ B. ↘ C. ↙ D. ↗

C 3. A student observes a specimen under high (400X) power and then switches back to low (100X) power. How will the appearance of the image change when going from high power to low power?
A. larger and darker
B. smaller and darker
C. smaller and brighter
D. larger and brighter

430 4. A microscope is equipped with a 10X ocular and two objectives - one is 10X and the other is 43X. What is the highest total magnification possible with this microscope?

Questions 5 - 9 are based upon the following diagram:



1.4 - 1.5 mm 5. The diagram represents a field of view through a compound light microscope. What is the diameter of the field of view in millimeters (mm)?

1400-1500 µm 6. What is the diameter of this field of view in micrometers (µm)?

600 µm 7. What is the approximate length of the organism in micrometers?

350-375 µm 8. This diagram represents the field of view under low power with a total magnification of 100X. If the high power field is 400X, what would be the diameter of the high power field in micrometers?

B 9. When you switch from low power to high power, what happens to depth of focus?
A. it will be greater B. it will be less
C. it will remain the same D. it will be nonexistent