MICROSCOPE REVIEW

1. The magnifying power of the ocular lens is _____

2. The magnifying power of the low-power objective lens is _____. The total magnification of the microscope is _____

3. The magnifying power of the medium-power objective lens is _____. The total magnification of the microscope is _____

4. The magnifying power of the high-power objective lens is _____. The total magnification of the microscope is _____

5. What relationship exists between the length of the objective lens and its magnifying power?

6. What does turning the course adjustment knob do to the stage?

7. How does the microscope image of the "e" compare to the actual "e" on the slide?

8. Circle the choice below that would be the way you would see the microscope of the letter "b" if it had been positioned in the normal reading position on the slide.

   a) d b) b c) p d) q

9. Why is it important to center the part of the slide that you are looking at in the center of the field of view before you change to a higher power objective lens?

10. Name the structure that allowed you to change the objective lens. _____

11. What is the significance of the 'clicks' that you feel as you change the objective lens?

12. A microscope has a magnifying power of 150X. The magnifying power of the objective is 10X. What is the magnifying power of the eyepiece?

13. Calculate the *highest* total magnification for a microscope with an ocular lens of 15X and objective lenses of 5X, 10X and 30X. (Answer: 450X)

14. Calculate the actual size of a cheek cell if four cheek cells fit across the field diameter when the 10X objective lens, (i.e. field diameter = 1.8 mm). (Answer = 0.45 mm)

15. A student was observing cheek cells using low power objective lens, 4X, (i.e. field diameter = 4.5 mm). She estimated that 15 cells fit across the field of view. Calculate the size of one cheek cell in micrometers. (Answer = 300 Fm)