Complete each of the following questions.

7. A microscope has an eyepiece lens with a power of 5X.  The objective lens being used has a power of 10X.

Total magnification =

8. A microscope has an eyepiece lens with a power of 15X.  The objective lens being used has a power of 40X

Total magnification =

9. A microscope has an eyepiece lens with a power of 10X.  The objective lens being used has a power of 10X.

Total magnification =

10. Sue observes a clear plastic, millimeter ruler under low power of her microscope.  She sees three divisions of the ruler.  What would be the field diameter of Sue’s microscope on low power? (in micrometers ('µm')

11.      Convert each of the following to micrometers (µm).

a)     3.5mm

b)     4.0mm

c)      1.5 cm

d)     0.5 cm

 12.      The following information is for a microscope which has an eyepiece lens (ocular lens) with a power of 10X:

|  |  |  |
| --- | --- | --- |
| Objective Lens | Power | Field Diameter |
| low | 4X | 3500 µm |
| medium | 10X |        ? |
| high | 40X |        ? |

Using the information provided above, calculate the field diameter for medium and high power.