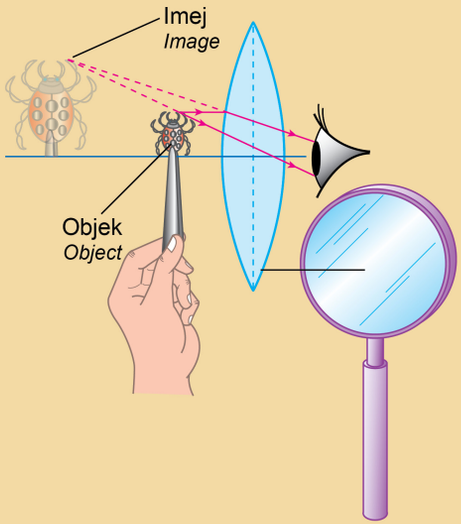
PEMBESARAN LINEAR
LINEAR MAGNIFICATION

Kanta pembesar / *Magnifying Lens*

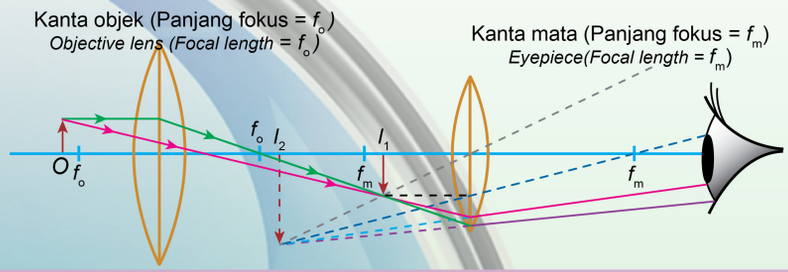


Pembesaran linear / *Linear magnification* = $\frac{\text{Saiz imej / Image size}}{\text{Saiz objek / Object size}}$

$m = \frac{v}{u}$

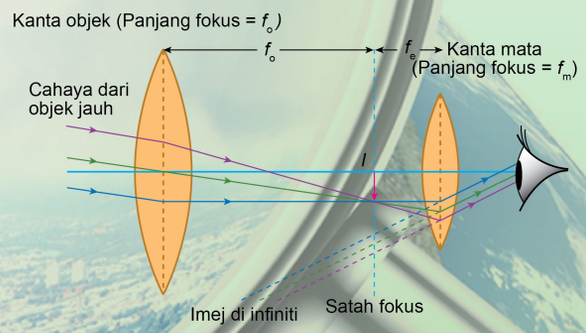
- Kanta pembesar merupakan peralatan optik paling ringkas yang digunakan untuk memperbesar imej suatu objek.
  A magnifying lens is the simplest optical instrument to enlarge the image of an object.
- Kanta pembesar dikenal sebagai mikroskop ringkas.
  A magnifying lens is also known as a simple microscope.
- Kanta pembesar merupakan suatu kanta cembung tunggal yang mempunyai panjang fokus yang pendek.
  It consists of a single convex lens with short focal length.

Mikroskop majmuk / *Compound Microscope*



- Kedua- dua kanta berkuasa tinggi. / *Both lenses have high power.*
- $f_o < f_m$
- I_1 : nyata, songsang, dan lebih besar. / *Real, inverted, and magnified.*
- Imej akhir : maya, songsang, dan lebih besar.
  Final image : Virtual, inverted, and magnified.
- Jarak di antara dua kanta melebihi $f_o + f_m$
  The distance between the two lenses is greater than $f_o + f_m$
- Pembesaran, $m = m_1 \times m_2$ / *Magnification, $m = m_1 \times m_2$*
- m_1 = Pembesaran kanta objek / *m_1 = Magnification of the objective lens*
- m_2 = Pembesaran kanta mata / *m_2 = Magnification of the eyepiece*

Teleskop astronomi / *Astronomical Telescope*



- Kanta objek berkuasa rendah dan kanta mata berkuasa tinggi.
  The objective lens has low power and the eyepiece has high power.
- Imej dihasilkan oleh kanta objek adalah nyata, songsang, dan lebih kecil.
  The image formed by the objective lens is real, inverted, and diminished.
- Dalam pelarasan normal, jarak di antara dua kanta = $f_o + f_m$
  In normal adjustment, the distance between the two lenses = $f_o + f_e$
- Pembesaran, $m = \frac{f_o}{f_m}$ / Magnification $= m = \frac{f_o}{f_e}$