

3)

$$z = \frac{B_f}{D}$$

$$z + \Delta z = \frac{B_f}{D + \Delta d}$$

$$\Delta z = \frac{B_f}{D + \Delta d} - z$$

$$\Delta z = \frac{B_f - zD - z\Delta d}{D + \Delta d}$$

when  $B_f = zD$

$$\Delta z = \frac{zD - zD - z\Delta d}{D + \Delta d}$$

$$\Delta z = - \frac{z\Delta d}{D + \Delta d}$$