

2.78  
2

⊖

$$n=1 \quad 3 + \frac{1}{3} \geq 2$$

$$n \geq k+1 \quad 3^{k+1} + 3^{k+1} + \dots + \frac{1}{3^{k+1}} + \frac{1}{3^{k+1}} \geq k+2 \quad / \cdot 3$$

$$3^{k+2} + 3^k + \dots + \frac{1}{3^{k+2}} + \frac{1}{3^k} \geq 3k+6$$

$$3^{k+2} + k+1 \geq 3k+6$$

$$3^{k+2} \geq 2k-5$$

$$k=2 \quad 3^4 > -1$$

: איבריגורט און

$$k=m \quad 3^{m+2} \stackrel{A}{\geq} 2m-5$$

איבריגורט און

$$k=m+1 \quad 3^{m+3} \stackrel{B}{\geq} 2m-3$$

$$3 \cdot 3^{m+2} \stackrel{B}{\geq} 2m-3$$

$$3(2m-5) \geq 2m-3$$

$$6m-15 \geq 2m-3$$

$$4m \geq 12$$

$$\boxed{m \geq 3}$$

⊕

און און, 1, 2