

2.89

(2)

$n=1$

$$\frac{1}{4+8+3} = \frac{1}{6+9} \quad \checkmark$$

$n=k$
 $h=k$
 $h=k+1$

היבט אחר

$$\frac{1}{4k^2+8k+3} + \dots + \frac{1}{4n^2+8n+3} + \frac{1}{4(n+1)^2+8(n+1)+3} \stackrel{?}{=} \frac{n+1}{6n+15}$$

$$\frac{n}{6n+9} + \frac{1}{4n^2+16n+15} \stackrel{?}{=} \frac{n+1}{6n+15}$$

$$\frac{n}{3(2n+3)} + \frac{1}{(2n+3)(2n+5)} \stackrel{?}{=}$$

$$\frac{(2n+5)n+3}{3(2n+3)(2n+5)} = \frac{2n^2+5n+3}{3(2n+3)(2n+5)} = \frac{(2n+3)(n+1)}{3(2n+3)(2n+5)}$$