

$$\frac{2 \cdot 7 \cdot 3}{1}$$

$$n=1$$

$$2+3+4+5 = 2 \cdot 7$$

$$n=k$$

$$(k+1) + (k+2) + \dots + (3k+2) = (k+1)(4k+3)$$

$$n=k+1$$

$$(k+1) + (k+3) + \dots + (3k+2) + (3k+3) + (3k+4) + (3k+5) \stackrel{?}{=} (k+2)(4k+7)$$

$$(k+1)(4k+3) - (k+1) + 9k + 12 \stackrel{?}{=} (k+2)(4k+7)$$

$$4k^2 + 15k + 14 =$$