$$T(n) = \begin{cases} T(1) = 1 \\ T(n) = T(n-1) + 3n + 2 \end{cases}$$

$$T(n) = T(n-1) + 3n + 2$$
$$= (T(n-2) + 3(n-1)) + 3n + 2$$
$$= ((T(n-3) + 3(n-2) + 2) + 3(n-1) + 2) + 3n + 2$$

$$= T(n-3) + 3(n-2) + 3(n-1) + 3(n \cdot 0) + 2 + 2 + 2$$

$$\overbrace{\text{SOMA DE P.A.}}$$

$$T(i) = T(n-i) + 3\left[(n-2) + (n-1) + (n \cdot 0)\right] + 2i$$
$$T(n-i) + 3\left[i\left(\frac{n + n - i + 1}{2}\right)\right] + 2i$$

$$T(n \not{\ } i + 1) = T(n-i) + 3i\left(\frac{2n - i + 1}{2}\right) + 2i \implies T(1) = 1$$
$$n - i = 1$$
$$\boxed{i = n - 1}$$

$$= T(1) + 3(n-1)\left(\frac{2n - (n-1) + 1}{2}\right) + 2(n-1)$$

$$= 1 + (3n - 3)\left(\frac{n+2}{2}\right) + 2n - 2 = \frac{3n^2 + 6n - 3n - 6}{2} + 2n - 1$$

$$= \frac{3n^2}{2} + \frac{3n}{2} - 3 + 2n - 1 = \frac{3n^2}{2} + \frac{7n}{2} - 4 \implies \boxed{\Theta(n^2)}$$