### 8.1 Patterns (continued)

Determine the next three numbers in the following pattern:

$$
2,5,8,11, \ldots
$$

Now determine the $50^{\text {th }}$ number in the same pattern.

Find the $100^{\text {th }}$ term in this pattern:

$$
7,4,1,-2,-5, \ldots
$$

Write an equation relating $t$ to $n$ based on the following table:

| $n$ | 0 | 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $t$ | 4 | 6 | 8 | 10 | 12 |

Determine the number of sides needed to produce 10 polygons.


How many hexagons are needed to produce the $50^{\text {th }}$ picture in this pattern?


