

An almanac states that it is possible to determine the temperature by counting the number of times a cricket chirps. To use cricket chirps to determine the temperature in degrees Celsius, the almanac gives the steps below.

- Count the number of times a cricket chirps in 25 seconds.
  - Divide that number by 3.
  - Then add 4 to get the temperature in degrees Celsius.
- a. Use the information from the almanac to show that when a cricket chirps 27 times in 25 seconds, the temperature is 13 degrees Celsius.
- b. In your Student Answer Booklet, copy the table below, and fill in the missing numbers using the information from the almanac. Show or explain how you got your answers.

| <b>Number of Chirps in 25 Seconds</b> | <b>Temperature (degrees Celsius)</b> |
|---------------------------------------|--------------------------------------|
| 27                                    | 13                                   |
| 48                                    | ?                                    |
| ?                                     | 28                                   |

- c. Based on your table, write an expression that can be used to calculate the temperature in degrees Celsius when a cricket chirps  $n$  times in 25 seconds.