Name:_____Date:_____Period:___

Crickets

Reflect & Apply

1.) To find the temperature in degrees Fahrenheit for a Southwestern cricket, you need to count the number of chirps in thirty seconds and add thirty-three. Find an equation that can help you determine the temperature given the number of chirps per minute.

2.) If you hear a Southwestern cricket chirp 90 times in a minute, what is the temperature outside?

3.) If you know the temperature outside is 75 degrees Fahrenheit, about how many chirps would you expect to hear from a Southwestern cricket?

4.) Due to the geographical location of the area in which you live, there is a second type of cricket that is common in the area, the coastal cricket. During a recent study, two biologists found that a coastal cricket chirped 60 times when the temperature was 61 degrees. Also, it was noted that the cricket chirped 99 times when the temperature increased to 74 degrees. Find an equation that can help you determine the temperature given the number of chirps produced by a coastal cricket.

5.) Is there a certain temperature where both crickets would chirp the same number of times? If that is the case, what is the temperature?

6.) Find the domain and range for each of the two crickets:

7.) Use the equations you found for the southwestern cricket and the coastal cricket to find the inverse of each equation.

8.) Find the Domain and the Range for the inverse functions of each of the two crickets.