Explanation of Each Exercise:

1. **Prime Numbers:**

   o **Function** `is_prime(number)` checks if the number is prime by eliminating numbers less than or equal to 1, divisible by 2 or 3, and uses a loop to check divisibility from 5 up to the square root of the number.

2. **Product of Random Numbers:**

   o **Function** `product_of_random_numbers()` generates two random numbers, asks the user to input their product, and then checks if the user's answer matches the correct product.

3. **Squares of Even Numbers:**

   o **Function** `squares_of_even_numbers(start, end)` calculates and prints the square of each even number within the specified range (100 to 200 in this case).

4. **Word Counter:**

   o **Function** `word_counter(text)` uses regular expressions to extract words from the text, counts their occurrences using `Counter` from the `collections` module, and prints the word counts.

5. **Check for Palindrome:**

   o **Function** `is_palindrome(s)` checks if a string reads the same forwards and backwards after normalizing it to lowercase and removing non-alphanumeric characters.