a. loops enable us to run code repeatedly, as much as necessary without writing it again

2.

- a. while statements only run the code when a condition is met and contained; do while statements run the code first, then repeat it if the condition is met
- a. Account Setup, Digits Sum exercise, and Guessing Game exercise

4.

- a. a loop that never ends, it doesn't reach it's condition
- b. creating a loop that doesn't change the condition it checks for; not including the condition it checks in the loop
- c. overflow means that it can't store some number data because it's beyond the limits of the amount of bits for that data type

5.

a. it runs 60 times

6.

a. anything that is below 123

7.

- a. counters increment by a fixed value
  - i. writing values into an array, keeping track of attempts
- b. accumulators increment in different amounts
  - adding sums, calculating averages

8.

```
a. int sum = 0;
for (int i = 3; i <= 10; i++)
{
   sum += i;
}</pre>
```

9.

- a. whether or not the range of repeats changes during execution of the loop
- b. whether or not the condition is based on a number value