Graded lab tasks

1. Write an program that reads a Celsius degree from the console and converts it to Fahrenheit and displays the result. The formula for the conversion is as follows:

   ```
   fahrenheit = (9 / 5) * celsius + 32
   ```

2. Write an program that reads in the radius and length of a cylinder and computes the area and volume using the following formulas:

   ```
   area = radius * radius * 3.14

   volume = area * length
   ```

3. Write a program that reads the length of the base and the height of a right-angled triangle and prints the area. Every number is given on a separate line.

4. Write a program that takes a number and print its square.

5. Write an program that reads a number in feet, converts it to meters, and displays the result. One foot is 0.305 meters.

6. Write an algorithm that converts pounds into kilograms. The program prompts the user to enter a value in pounds, converts it to kilograms, and displays the result. One pound is 0.454 kilograms.

7. Write an algorithm that reads an integer between 0 and 1000 and adds all the digits in the integer. For example, if an integer is 932, the sum of all its digits is 14. (Hint: Use the % operator to extract digits, and use the // operator to remove the extracted digit. For instance, 932 % 10 = 2 and 932 // 10 = 93.)

   ```
   Enter a number between 0 and 1000: 999 Enter
   The sum of the digits is 27
   ```

8. Given an airplane's acceleration a and take-off speed v, you can compute the minimum runway length needed for an airplane to take off using the following formula:

   $$length = \frac{v^2}{2a}$$

   Write an algorithm that prompts the user to enter v in meters/second (m/s) and the acceleration a in meters/second squared (m/s^2) and displays the minimum runway length.

   ```
   Enter speed and acceleration: 60, 3.5 Enter
   The minimum runway length for this airplane is 514.286 meters
   ```

9. (Find the number of years and days) Write a program that prompts the user to enter the minutes (e.g., 1 billion), and displays the number of years and days for the minutes. For simplicity, assume a year has 365 days. Here is a sample run:

```
Enter the number of minutes: 1000000000
1000000000 minutes is approximately 1902 years and 214 days
```

10. (Split digits) Write a program that prompts the user to enter a four-digit integer and displays the number in reverse order. Here is a sample run:

```
Enter an integer: 3125
3
1
2
5
```

11. Write a program that displays the following table:

a	b	a ** b
1	2	1
2	3	8
3	4	81
4	5	1024
5	6	15625