# Objective 2: Challenges

## Simple adder challenge

Difficulty: ⚒

Write a program that asks the user for two numbers, adds them together and outputs for example:
You entered numbers 5 and 12
They add up to 17

## Test marks challenge

Difficulty: ⚒

Write a program that will ask the user to enter three test marks out of 100 and output the average.

## Temperature converter challenge

Difficulty: ⚒

Write a program to enter a temperature in degrees Fahrenheit and display the equivalent temperature in degrees Centigrade.
The formula for conversion is Centigrade = (Fahrenheit – 32) * (5/9)

## Height & weight challenge

Difficulty: ⚒⚒

Write a program to convert a person's height in inches into centimetres and their weight in stones into kilograms.  (1 inch = 2.54 cm and 1 stone = 6.364 kg)

## Toy cars challenge

Difficulty: ⚒⚒

A worker gets paid £12/hour plus £0.60 for every toy car they make in a factory.  Write a program that allows the worker to enter the number of hours they have worked and the number of cars they have made. The program should output their wages for the day.

## Fish tank volume challenge

Difficulty: ⚒⚒

Write a program that will ask the user to enter the length, depth and height of a fish tank in cm.  Calculate the volume of water required to fill the tank and display this volume in litres and UK gallons.

To calculate volume in litres, multiply length by depth by height and divide by 1000.

## Circle properties challenge

Difficulty: ✖✖✖

Consider this circle:
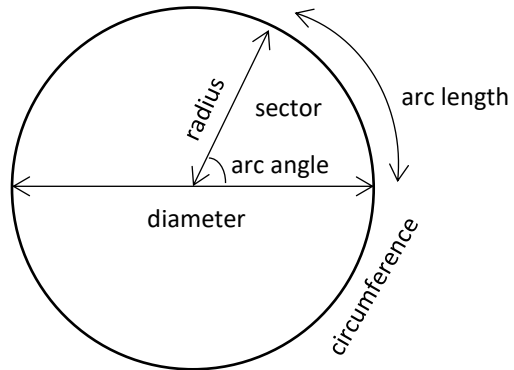


Write a program that:

- Asks the user to enter the diameter of a circle.
- Asks the user to enter the arc angle.
- Outputs the radius of the circle (diameter divided by 2).
- Outputs the area of the circle (3.14 multiplied by the radius squared).
- Outputs the circumference of the circle (3.14 multiplied by the diameter).
- Outputs the arc length (circumference multiplied by the arc angle, divided by 360).