Arrays (Group work)
Time: 30 mins

**Team A**
1. Write a program to read ten integer numbers; then find the sum of \((\text{num1} \times \text{num2}) + (\text{num3} \times \text{num4}) + \ldots + (\text{num9} \times \text{num10})\); and print the result.
2. Trace the program with the following values:
   \text{num1} = 9; \text{num2} = 7; \text{num3} = 3; \text{num4} = 6; \text{num5} = 1; \text{num6} = 8; \text{num7} = 2; \text{num8} = 5; \text{num9} = 10; \text{num10} = 4.

**Team B**
1. Write a program to read ten double numbers; then find the sum of \((\text{num1} / \text{num2}) + (\text{num3} / \text{num4}) + \ldots + (\text{num9} / \text{num10})\); and print the result.
2. Trace the program with the following values:
   \text{num1} = 9; \text{num2} = 7; \text{num3} = 6; \text{num4} = 3; \text{num5} = 8; \text{num6} = 1; \text{num7} = 5; \text{num8} = 2; \text{num9} = 10; \text{num10} = 4.

Why do we need arrays? (Individual work)
Time: 20 mins

**For the following exercises the book is not allowed**
1. What is an array? Explain in your own words.
2. Write down the general form to declare a one-dimensional array; general syntax to instantiate an array an array object. How can you combine these two general forms in one sentence?
3. Loops can be used to process arrays in several ways. Write down four ways.