New Parallel Algorithms Continued Solutions

std::transform

- Briefly describe the std::transform function and write a program to demonstrate its use
  - std::transform applies a supplied function object to each element on the range and writes the results to another container
- Write another program which demonstrates an alternative way to use it

std:: inner_product

- Briefly describe the std::inner_product function and write a program to demonstrate its use
  - std::inner_product multiplies the corresponding elements of two containers together and calculates their sum

std::transform_reduce

- Briefly describe the std::transform_reduce function and write a program to demonstrate its use
  - std::transform_reduce is an implementation of std::inner_product which supports execution policies
- Why is transform_reduce particularly useful in parallel programming?
  - Its operators can be overloaded to implement the "map and reduce" pattern
- What are the advantages of using a single transform_reduce function over calling std::transform and std::reduce separately?
  - It reduces overhead from serialization of transform results and allows re-use of threads between the two functions