MFE5130 – Financial Derivatives
First Term, 2019-20
Class Activity (11-September-2019) (Solution)

Important Notes:
1. This class activity is counted toward to your class participation score. **Fail** to hand in this class activity worksheet in the class will receive **0 score** for that class.

2. **0 mark** will be received if you leave the solution blank.

Name:	Student No.:

Trading Volume and Open Interest

Trading volume:
Trading volume counts the number of financial contracts that change hands for a given period of time. Simply speaking, trading volume counts the number of transactions of the financial contract.

Open interest:
Open interest measures the total number of outstanding contracts. More precisely, open interest is the total number of contracts for which counterparties have a future obligation to perform. (Since each trade of a contract has both a buyer and seller, a buyer-seller pair counts as _one_ contract.). Open interest is an important statistic in derivatives markets.

Problem
Consider a financial contract in MFE exchange. There are three traders, A, B, and C. Over one day, the following trades occur:
- A long, B short, 5 contracts.
- A long, C short, 15 contract.
- B long, C short, 10 contracts.
- C long, A short, 20 contracts.

a. What is each trader's net position in the contract at the end of the day? (Calculate long positions minus short positions.)

Solution
We have the following for the different trades and different dealers:

	A	B	C
Trade 1	+5	–5	
Trade 2	+15		–15
Trade 3		+10	–10
Trade 4	–20		+20
Total	0	+5	–5

Therefore, trader A's net position is zero, trader B is long five contracts, and trader C is short five contracts.

b. What are trading volume and open interest? (Calculate open interest as the sum of the net *long positions*, from your previous answer.)

    Solution
    Trading volume is equal to $5 + 15 + 10 + 20 = 50$.
    Open interest is equal to 5.

c. How would your answers have been different if there were an additional trade: C long, B short, 5 contracts?

    Solution
    Now all traders have a net position of zero. Trading volume has increased by five contracts to 55. Open interest is equal to zero.