```
/*Week 10
- Self
Review
Question
1. Find
the
output of
the
following
code
*/

#include <iostream>
using namespace std;

void funA(int Ary1[], char Ary2[]);
void funB(char grade, int& A, int& B, int& C, int& D, int& F);

int main() {
	int Ary1[10] = { 85,72,61,45,50,53,55,86,66,33 };
	char Ary2[10];
	int i, A = 0, B = 0, C = 0, D = 0, F = 0;

	funA(Ary1, Ary2);
	cout << "\n\n";
	for (i = 0; i < 10; i++) {
		cout << Ary1[i] << ", ";
		funB(Ary2[i], A, B, C, D, F);
	}

	cout << "\n\n A : " << A << "\n B : " << B << "\n C : " << C << "\n
D : "
		<< D << "\n F : " << F << "\n\n";

	return 0;
}

void funA(int Ary1[], char Ary2[]) {
	for (int i = 0; i < 10; i++) {
```

```
                if (Ary1[i] >= 75) {
                        Ary2[i] = 'A';
                }
                else if (Ary1[i] >= 60 && Ary1[i] < 75) {
                        Ary2[i] = 'B';
                }
                else if (Ary1[i] >= 50 && Ary1[i] < 60) {
                        Ary2[i] = 'C';
                }
                else if (Ary1[i] >= 40 && Ary1[i] < 50) {
                        Ary2[i] = 'D';
                }
                else if (Ary1[i] >= 0 && Ary1[i] < 40) {
                        Ary2[i] = 'F';
                }
        }
}


void funB(char grade, int& A, int& B, int& C, int& D, int& F) {
        if (grade == 'A') {
                A++;
        }
        else if (grade == 'B') {
                B++;
        }
        else if (grade == 'C') {
                C++;
        }
        else if (grade == 'D') {
                D++;
        }
        else if (grade == 'F') {
                F++;
        }
}
```

QUESTION 2

```
/*Array
2
Function
Self
Review
Question
2
  Find the errors in the sample code given in the lab module.
  Then fix it and show the output.
*/


#include <iostream>
using namespace std;


void functionA(int num); //as we want to pass individual elements, remove []
void functionB(int newnumbers[]);
void functionC(int newnumbers[]);


void main() {
	int numbers[10] = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 };
	int i, j = 0, k = 0;


	for (i = 0; i < 10; i++) {
		functionA(numbers[i]); //passing individual elements
	}


	cout << "\n\n";
	functionB(numbers); //passing the whole array
	functionC(numbers); //passsing the whole array
}


void functionA(int num) {
	cout << num << " ";
}


void functionB(int newnumbers[]) {
	for (int i = 0; i < 10; i++) {
		newnumbers[i] = newnumbers[i] * 5;
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        }
}


void functionC(int newnumbers[]) {
        for (int i = 0; i < 10; i++) {
                cout << newnumbers[i] << " ";
        }
}
```

QUESTION 3

```
/*Complete
the
program
skeleton
given in
the lab
module.
*/


#include <iostream>
using namespace std;


void printElement(int);
void average(int [], int row);
void updateQuantity(int[][3]);


void main() {
	int quantity[5][3] = { {30, 25, 18}, {16, 21, 51}, {19, 42, 25},
{35, 26, 38}, {16, 33, 22} };
	cout << "\n\n The original elements in quantity: \n";


	for (int i = 0; i < 5; i++) {
		for (int j = 0; j < 3; j++) {
			printElement(quantity[i][j]);
		}
		cout << "\n";
	}


	for (int i = 0; i < 5; i++) {
		average(quantity[i], i);
	}


	updateQuantity(quantity);

	//Print the updated quantity by reuse the printElement function
	cout << "\n\nThe updated elements in the array is as the following:
" << endl;
	for (int i = 0; i < 5; i++) {
		for (int j = 0; j < 3; j++) {
```

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                        printElement(quantity[i][j]);
                }
                cout << "\n";
        }
}


void printElement(int quant) {
        cout << " " << quant;
}


void average(int quantityRow[], int row) {
        int total = 0, ave;


        for (int i = 0; i < 3; i++) {
                total += quantityRow[i];
        }
        ave = total / 3;


        cout << "\n The average value of the elements in row "
                 << row + 1 << " : " << ave;
}


void updateQuantity(int newQuantity[][3]) {
        for (int i = 0; i < 5; i++) {
                for (int j = 0; j < 3; j++) {
                        newQuantity[i][j] = newQuantity[i][j] + 20;
                }
        }
}
```