

- Q1 a. (1) 7.500000
(2) 7.000000
(3) 6.400000
(4) -6.000000
(5) -14.000000

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- (b) (1) `int a = rand() % 100 + 1;`
(2) `int b = rand() % 10;`
(3) `int c = rand() % 113 + 1000;`
(4) `int d = rand() % 3 - 1;`
(5) `int e = rand() % 15 - 3;`

- (c) (1) `int a = (rand() % 5 + 1) * 2;`
(2) `int b = ((rand() % 5 + 1) * 2) + 1;`
(3) `int c = (rand() % 5 + 1) * 4 + 2;`

- (d) (i) `int counts[10] = {0};`
(ii) `for(size_t i = 0; i < 15; i++) bonus[i] += 1;`
(iii) `for(size_t i = 0; i < 12; i++)
scanf("%f", &monthlyTemperatures[i]);`
(iv) `for(size_t i = 0; i < 5; i++)
printf("%d\t", bestScores[i]);`

- (e) (i) False; we specify the index/location not value

(ii) True.

(iii) False: `int p[100];`

(iv) False: you only need 1 statement `int arr[15] = {0};`

(v) True:

(vi) True:

(f) (i) `int t[2][5];`

(ii) 2 rows, 5 columns

(iii) `t[0][2], t[1][2], t[2][2]`

(iv) `t[1][2] = 0;`

(v) `int t[2][5] = {0};`

(vi) `for (size_t i = 0; i < 2; i++) {
 for (size_t j = 0; j < 5; j++)
 t[i][j] = 0;
}`

(vii) `for (size_t i = 0; i < 2; i++) {
 for (size_t j = 0; j < 5; j++)
 scanf("%d", &t[i][j]);
}`

(viii) `int min = t[0][0];
for (size_t i = 0; i < 2; i++) {
 for (size_t j = 0; j < 5; j++) {
 if (t[i][j] < min)
 min = t[i][j];
 }
}
printf("The min value is %d", min);`

(ix) `for (size_t i = 0; i < 5; i++)
 printf("%d\t", t[0][i]);`

(x) `int sum = 0;
for (size_t i = 0; i < 2; i++)
 sum += t[i][3];`

(xi) `printf("\t1\t2\t3\t4\t5");
for (size_t i = 0; i < 2; i++) {
 printf("\n%d", i+1);
 for (size_t j = 0; j < 5; j++)
 printf("\t%d", t[i][j]);
}`

Qd. This function recursively iterates through an array of 'int's passed in and prints out each element in the array separated by spaces. The output is as follows.

5 4 7 9 0 6 2 1 3 8 5

The function takes the input parameters of an array of integers, a starting index and the size of the array. It effectively starts at the startIndex specified when the function is first called in the main, then recursively iterates through and prints every element thereafter until it reaches the end of the array.

[Faint, illegible text]