



ACES Java I Placement Test

ACES JAVA I PLACEMENT TEST

The Java I placement test consists of 7 problems. Students should complete the test in 40 minutes. If you can get 4 or more correct answers, it is considered that the test is passed.

Problem 1. Consider the following code segment

```
int x;  
x = 53;  
  
if (x > 10)  
{  
    System.out.print("A");  
}  
  
if (x > 30)  
{  
    System.out.print("B");  
}  
else if (x > 40)  
{  
    System.out.print("C");  
}  
  
if (x > 50)  
{  
    System.out.print("D");  
}  
  
if (x > 70)  
{  
    System.out.print("E");  
}
```

What is output when the code is executed?

- (A) A
- (B) D
- (C) ABD
- (D) ABCD
- (E) ABCDE



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Problem 2. Consider the following code segment:

```
int x = 0;
int y = 0;
int z = 0;
if (x == 0) {
    if (y == 1) {
        z += 2;
    }
} else
{
    z += 4;
}
System.out.print(z)
```

What is printed if x, y, and z are all equal to zero before the code segment executes?

- (A) 0
- (B) 1
- (C) 2
- (D) 4
- (E) 6

Problem 3. Consider the following code segment

```
int j;
int k;
for (j = -2; j <= 2; j = j + 2)
{
    for (k = j; k < j + 3; k++)
    {
        System.out.print(k + " ");
    }
}
```

What is the output when the code is executed?

- (A) -2 -1 0
- (B) -2 -1 0 1 2
- (C) 0 1 2 0 1 2 0 1 2
- (D) -2 0 2
- (E) -2 -1 0 0 1 2 2 3 4



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Problem 4. Consider the following code segment.

```
int i = 8;
int j = 2;
i += j;
System.out.print(i + " ");
i -= j;
System.out.print(i + " ");
i *= j;
System.out.print(i + " ");
i /= j;
System.out.print(i + " ");
System.out.print(20 % i);
```

What is the output when the code is executed?

- (A) 10 6 12 6 6
- (B) 2 0 16 4 4
- (C) 16 8 12 2 6
- (D) 10 8 16 8 4
- (E) 10 8 16 8 6

Problem 5. Consider the following code segment.

```
int x= 20;
String sup = (x < 15) ? "Small" : (x > 20) ? "Large" : (x < 22)? "Tiny" : "Huge";
System.out.println(sup)
```

What is the output when the code is executed?

- (A) Small
- (B) Large
- (C) Tiny
- (D) Huge



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Problem 6. Consider the following code segment.

```
int x = -10;
int y = 10;
int z = 20;

if (z > x && z < y)
{
    System.out.print("Inside");
}
else if (z == x)
{
    System.out.print("Left");
}
else if (z == y)
{
    System.out.print("Right");
}
else
{
    System.out.print("Outside");
}
```

What is the output when the code is executed?

- (A) Inside
- (B) Left
- (C) Right
- (D) Outside
- (E) No Above



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Problem 7. Consider the following code segment.

```
String course = "ACES Java I is a hands-on programming course.";
int count = 0;
for (int i =0; i < course.length(); i++)
{
    if(course.charAt(i) == 'a')
    {
        count++;
    }
}
System.out.print(count);
```

What is the output when the code is executed?

- (A) 44
- (B) 6
- (C) 5
- (D) 8
- (E) 0