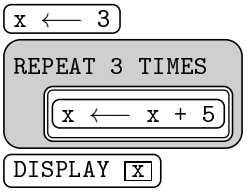
# Loops Quiz (Practice, Version B)

Name: _____ Period: _____ Date: _____

Practice version. 10 questions, 10 points, 15 minutes. Choose the single best answer. Code labeled **App Lab** is JavaScript; all other code is AP pseudocode (Exam Reference Sheet). When a program prints more than one line, the lines are listed in order, separated by spaces.

**1.** What is displayed as a result of executing the code segment?




(A) 18
(B) 15
(C) 8
(D) 23

**2.** What is displayed as a result of executing the code segment?

```
n ← 50
count ← 0
REPEAT UNTIL (n < 10)
{
   n ← n / 2
   count ← count + 1
}
DISPLAY(count)
```

(A) 2
(B) 4
(C) 3
(D) 6

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**3.** Which of the following code segments results in an infinite loop?

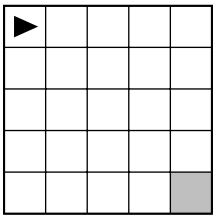
(A)
```
k ← 0
REPEAT UNTIL (k = 9)
{
   k ← k + 2
}
```

(B)
```
k ← 20
REPEAT UNTIL (k < 0)
{
   k ← k - 3
}
```

(C)
```
k ← 1
REPEAT 3 TIMES
{
   k ← k * 2
}
```

(D)
```
k ← 1
REPEAT UNTIL (k > 100)
{
   k ← k * 2
}
```

**4.** The robot below starts in the top-left square, facing right. Which code segment moves the robot to the gray square without leaving the grid?



(A)
```
REPEAT 3 TIMES
{
   MOVE_FORWARD()
   ROTATE_RIGHT()
   MOVE_FORWARD()
   ROTATE_LEFT()
}
```

(B)
```
REPEAT 4 TIMES
{
   MOVE_FORWARD()
   ROTATE_LEFT()
   MOVE_FORWARD()
   ROTATE_RIGHT()
}
```

(C)
```
REPEAT 4 TIMES
{
   MOVE_FORWARD()
}
ROTATE_LEFT()
REPEAT 4 TIMES
{
   MOVE_FORWARD()
}
```

(D)
```
REPEAT 4 TIMES
{
   MOVE_FORWARD()
   ROTATE_RIGHT()
   MOVE_FORWARD()
   ROTATE_LEFT()
}
```

**5.** Which code segment displays `3 6 9 12 15`?

(A)
```
n ← 0
REPEAT 5 TIMES
{
   DISPLAY(n)
   n ← n + 3
}
```

(B)
```
n ← 3
REPEAT 5 TIMES
{
   DISPLAY(n)
   n ← n + 3
}
```

(C)
```
n ← 3
REPEAT 4 TIMES
{
   n ← n + 3
   DISPLAY(n)
}
```

(D)
```
n ← 3
REPEAT UNTIL (n > 15)
{
   n ← n + 3
   DISPLAY(n)
}
```

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**6. App Lab.** What is printed to the console?

```
for (var i = 1; i < 4; i++) {
  console.log(i);
}
```

(A) `1 2 3 4`
(B) `0 1 2 3`
(C) `1 2 3`
(D) `0 1 2`

**7. App Lab.** What is printed to the console?

```
var product = 1;
for (var i = 1; i <= 4; i++) {
  product = product * 2;
}
console.log(product);
```

(A) `8`
(B) `24`
(C) `4`
(D) `16`

**8. App Lab.** What is printed to the console?

```
var n = 100;
while (n > 10) {
  n = n - 25;
}
console.log(n);
```

(A) `0`
(B) `25`
(C) `10`
(D) `-25`

**9. App Lab.** How many times is `go` printed?

```
for (var i = 10; i > 0; i = i - 3) {
  console.log("go");
}
```

(A) `3`
(B) `4`
(C) `10`
(D) `5`


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**10. App Lab.** This code is supposed to print `0 1 2 3 4`, but it never stops.

```
var level = 0;
while (level < 5) {
  console.log(level);
  level = level - 1;
}
```

Which change makes it work as intended?

(A) Change `level < 5` to `level > 5`

(B) Change `var level = 0;` to `var level = 5;`

(C) Change `while` to `if`

(D) Change `level - 1` to `level + 1`

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