

# Trace Tables Test

1. Complete the truth table for algorithm below.

```
A = 3;  
B = 7;  
C = -1;  
  
loop while A > 0  
  if(B * C > A)  
    B = B - C  
  else  
    A = A - 1  
  end if  
  
  C = C + A  
end loop  
  
output A, " ", B, " ", C
```

A	B	C
3	7	-1

What is output be the last line of the algorithm?

2. Given the following array: LIST

[0]	[1]	[2]	[3]	[4]	[5]	[6]
10	13	22	38	41	59	67

and the method CRAZY.

```
method CRAZY(X)
  A = 0;
  B = 7;
  loop while A <= B
    M = (A + B) / 2;
    if LIST[M] = X
      return M;
    else if (LIST[M] < X)
      A = M + 1;
    else
      B = M - 1;
    end if
  end loop

  return -1;
```

Use the trace table below to determine what is returned by a call to method CRAZY(41).

A	B	M

Return value = \_\_\_\_\_

Use the trace table below to determine what is returned by a call to method CRAZY(13).

A	B	M

Return value = \_\_\_\_\_

Explain what this algorithm does?