

# Tracer 1

Wednesday, September 27, 2023 9:25 AM

For each question, complete the following:

1. Create the loop from the prompt or trace the loop provided.
2. Show your work tracing the variable(s). Assume the variables are named  $n$ ,  $m$ , etc.
3. Answer the following questions:
  - a. How many iterations are performed?
  - b. What is/are the final value of the variable(s) when the loop terminates?

**Example:** Create a while loop that counts from 5 to 25 in increments of 4.

```
int n = 5;
while (n <= 25)
{
    n = n + 4;
}
```

Number of iterations: 6

n: 5, 9, 13, 17, 21, 25, 29

Final value: 29

1. Create a while loop that displays the numbers from 1 to 10.
2. Create a while loop that displays the numbers from 27 down to 15.
3. Create a while loop that displays the numbers 1 to 30 in increments of 3.
4. Create a while loop that displays the numbers from 5 to 50 in increments of 5.
5. Trace the following loop:

```
int n = 10;

while (n <= 45)
{
    n = n * 2;
    n = n - 5;
    Console.WriteLine(n);
}
```

6. Trace the following loop:

```
int n = 1;

while (n < 100)
{
    n = n + 25;
    n = n - 10;

    if (n % 2 == 0)
    {
        Console.WriteLine(n);
    }
}
```