

Pseudocode Pattern Puzzle 1

Work out the pattern and complete the pseudocode by replacing ?, ?? and ??? with different expressions (numbers, variables or calculations).

For example, for the sequence

6 8 10 12...16 ? is 6 ?? is 2 ??? is 16

```
n = ?
i = 0
while (n <= ??)
begin
    print(n + " ")
    n = n + ???
    i = i + 1
end
```

Create a dry run / trace table and then write a program fragment in your favourite language to check your answer before looking at the solutions.

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|-------------------------|-----------|------------|-------------|
| 1) 2 4 6 8 10 ... 20 | ? = _____ | ?? = _____ | ??? = _____ |
| 2) 3 6 9 12 ... 33 | ? = _____ | ?? = _____ | ??? = _____ |
| 3) 1 3 5 7 9 ... 99 | ? = _____ | ?? = _____ | ??? = _____ |
| 4) 21 28 35 ... 63 | ? = _____ | ?? = _____ | ??? = _____ |
| 5) 5 6 7 8 9 ... 10 | ? = _____ | ?? = _____ | ??? = _____ |
| 6) 0 0 1 3 6 10 ... 21 | ? = _____ | ?? = _____ | ??? = _____ |
| 7) 5 6 8 11 15 ... 26 | ? = _____ | ?? = _____ | ??? = _____ |
| 8) 3 3 5 9 15 23 ... 33 | ? = _____ | ?? = _____ | ??? = _____ |
| 9) 1 2 4 8 16 ... 64 | ? = _____ | ?? = _____ | ??? = _____ |
| 10) 8 16 32 ... 128 | ? = _____ | ?? = _____ | ??? = _____ |