

8/29 Using Differences to Identify Patterns

$$5, 10, 15, 20, \underline{25}, \underline{30}, \underline{35}$$

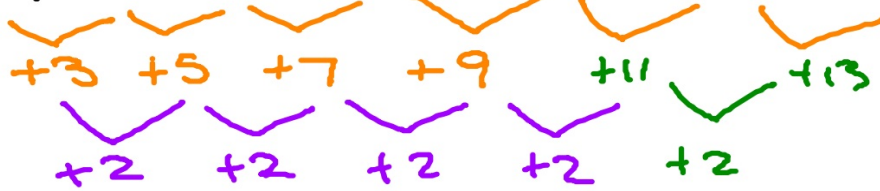
Blue checkmarks connect the numbers in the sequence. Below each checkmark is a blue "+5".

← First Difference

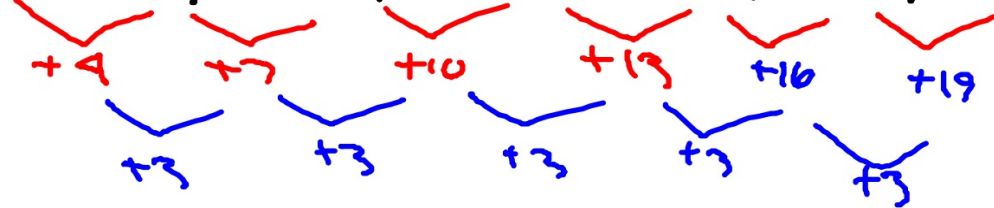
$$48, 45, 42, 39, \underline{36}, \underline{33}$$

Green checkmarks connect the numbers in the sequence. Below each checkmark is a green "-3".

1, 4, 9, 16, 25, 36, 49



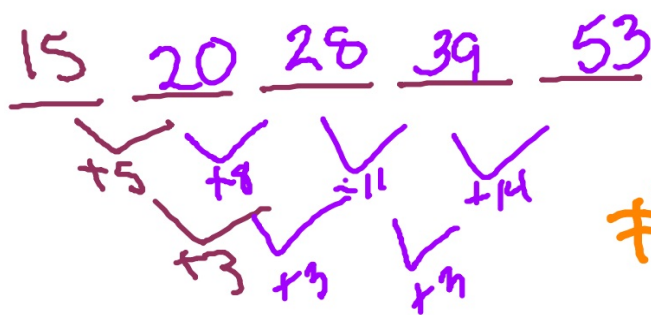
37, 41, 48, 58, 71, 87, 106



If the 1st diff of a sequence is a constant +4, and the 2nd term is 8, find the first 5 numbers in the sequence.

$$\begin{array}{ccccccccc} \underline{4} & \underline{8} & \underline{12} & \underline{16} & \underline{20} & & & & \\ & \swarrow & \swarrow & \swarrow & \swarrow & & & & \\ & +4 & +4 & +4 & +4 & & & & \end{array}$$

If the 2nd difference of a sequence is a constant +3, and the first of the first differences is +5, and the first term is 15, find the next 4 numbers in the sequence.



HW:
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all