

Follow the Rules Extra Challenge

I can order and compare numbers up to 10 000 000.



We can use a formula to generate a sequence. For example, let's look at the formula $3n + 2$.

' $3n$ ' means multiply by 3. So for the first term, we would do 3×1 . For the second term, we would do 3×2 , for the third term 3×3 , and so on. However, we can't forget the $+ 2$ part of the formula. So for the first term, once we have done 3×1 , we need to add 2 to the answer. This gives us $(3 \times 1) + 2 = 5$. The first term is 5. For the second term, we do $(3 \times 2) + 2$, which gives us 8. We can continue using this formula to find the next five terms of this sequence:

$$(3 \times 3) + 2 = 11$$

$$(3 \times 4) + 2 = 14$$

$$(3 \times 5) + 2 = 17$$

$$(3 \times 6) + 2 = 20$$

$$(3 \times 7) + 2 = 23$$

So the first seven terms of this sequence are 5, 8, 11, 14, 17, 20, 23.

Can you use these formulas to find the first 10 terms of each sequence?

$7n - 2$	
$11n + 4$	
$10n + 5$	
$3n - 4$	
$15n + 12$	

Follow the Rules Extra Challenge – Answers

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Can you use these formulas to find the first 10 terms of each sequence?

$7n - 2$	5, 12, 19, 26, 33, 40, 47, 54, 61, 68
$11n + 4$	15, 26, 37, 48, 59, 70, 81, 92, 103, 114
$10n + 5$	15, 25, 35, 45, 55, 65, 75, 85, 95, 105
$3n - 4$	-1, 2, 5, 8, 11, 14, 17, 20, 23, 26
$15n + 12$	27, 42, 57, 72, 87, 102, 117, 132, 147, 162