

Thursday 26th November 2020

O LO: Can I continue to recap my knowledge on number sequences?

A

Write the first six numbers in each sequence.

	Start at	Rule		Start at	Rule		Start at	Rule
1	23	+2	6	83	-7	11	21	+5
2	56	-8	7	59	+3	12	48	-6
3	125	+25	8	56	-7	13	19	+9
4	73	-5	9	5	+8	14	110	-20
5	47	+4	10	120	-3	15	21	+11

B

Complete these sequences by filling in the boxes. Write the rule each time.

- | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 1 | 83 | 85 | 87 | 89 | | | | | |
| 2 | -1 | -3 | -5 | -7 | | | | | |
| 3 | | | | 175 | 225 | 275 | 325 | | |
| 4 | | | | 61 | 72 | 83 | 94 | | |
| 5 | 68 | 64 | | | | | 48 | 44 | |
| 6 | 325 | 350 | | | | | 450 | 475 | |
| 7 | -24 | -20 | -16 | -12 | | | | | |
| 8 | -2 | | -10 | | -18 | | | -26 | |
| 9 | | 62 | | | | 47 | 42 | 37 | |
| 10 | 21 | 18 | | 12 | | 6 | | | |
| 11 | 62 | | 48 | | | 27 | 20 | | |
| 12 | | 49 | 42 | | 28 | 21 | | | |
| 13 | 114 | | 316 | | 518 | | 720 | | |
| 14 | | -40 | | | -25 | -20 | -15 | | |
| 15 | 68 | 57 | | 35 | | 13 | | | |
| 16 | -5 | | -15 | | | -30 | -35 | | |

C

Copy the sequences and write the next three numbers. What is the rule for each sequence?

- | | | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|----|------|------|------|------|----|----|----|----|-----|
| 1 | 77 | 83 | 89 | 95 | 7 | 3 | 1 | -1 | -3 | 13 | 48 | 38 | 28 | 18 |
| 2 | -2 | -4 | -6 | -8 | 8 | 0.25 | 0.5 | 0.75 | 1.0 | 14 | 45 | 38 | 31 | 24 |
| 3 | 0.1 | 0.3 | 0.5 | 0.7 | 9 | 132 | 121 | 110 | 99 | 15 | 64 | 52 | 40 | 28 |
| 4 | 68 | 77 | 86 | 95 | 10 | 0.05 | 0.06 | 0.07 | 0.08 | 16 | 5 | 24 | 43 | 62 |
| 5 | 25 | 20 | 15 | 10 | 11 | 54 | 62 | 70 | 78 | 17 | 19 | 13 | 7 | 1 |
| 6 | 35 | 60 | 85 | 110 | 12 | 18 | 14 | 10 | 6 | 18 | 48 | 69 | 90 | 111 |

I can find the rule for a number sequence.

To find the rule that links the numbers study the gaps.

Examples

4	0	-4	-8	-12
3	6	12	24	48
1	3	6	10	15

The rule is *subtract 4*.

The rule is *multiply by 2*.

The rule is *add one more each time*.

A

Write the first six numbers in each sequence.

Start at	Rule	Start at	Rule	Start at	Rule
1 210	-4	6 0.6	+0.1	11 0.01	+0.02
2 65	+4	7 201	+101	12 3.5	-0.5
3 $\frac{1}{2}$	$+\frac{1}{4}$	8 2	$\times 2$	13 5	$-\frac{1}{2}$
4 -60	+5	9 425	-50	14 1.25	+0.25
5 -1	-1	10 -3	-2	15 -18	-2

B

Complete these sequences by filling in the boxes. Write the rule each time.

1 -4 -3 -2 -1 <input type="text"/> <input type="text"/> <input type="text"/>	9 1 4 9 <input type="text"/> 25 <input type="text"/> <input type="text"/>
2 1.2 2.4 3.6 4.8 <input type="text"/> <input type="text"/> <input type="text"/>	10 100 <input type="text"/> 81 <input type="text"/> 66 <input type="text"/> 55
3 <input type="text"/> <input type="text"/> <input type="text"/> 2 $1\frac{2}{3}$ $1\frac{1}{3}$ 1	11 <input type="text"/> -5 <input type="text"/> <input type="text"/> 4 7 10
4 <input type="text"/> <input type="text"/> <input type="text"/> 230 330 430 530	12 <input type="text"/> 4 <input type="text"/> <input type="text"/> -5 -10 -16
5 19 38 <input type="text"/> <input type="text"/> <input type="text"/> 114 133	13 <input type="text"/> <input type="text"/> <input type="text"/> -5 -8 -11 -14
6 0.09 0.18 <input type="text"/> <input type="text"/> <input type="text"/> 0.54 0.63	14 2 4 <input type="text"/> 16 <input type="text"/> 64 <input type="text"/>
7 -33 -23 -13 -3 <input type="text"/> <input type="text"/> <input type="text"/>	15 290 <input type="text"/> 170 <input type="text"/> <input type="text"/> 65 50
8 $\frac{2}{9}$ $\frac{4}{9}$ <input type="text"/> <input type="text"/> <input type="text"/> $1\frac{3}{9}$ $1\frac{5}{9}$	16 1.3 <input type="text"/> 2.1 <input type="text"/> <input type="text"/> 3.3 3.7

C

Copy the sequences and write the next three numbers. Write down the rule each time.

1 -8 -6 -4 -2	7 1 3 9 27	13 1.0 0.75 0.5 0.25
2 2.1 4.2 6.3 8.4	8 15 11 7 3	14 $\frac{1}{10}$ $\frac{2}{10}$ $\frac{4}{10}$ $\frac{8}{10}$
3 25 20 15 10	9 $\frac{3}{5}$ $1\frac{1}{5}$ $1\frac{4}{5}$ $2\frac{2}{5}$	15 3.0 2.25 1.5 0.75
4 1 $2\frac{1}{5}$ $3\frac{2}{5}$ $4\frac{3}{5}$	10 49 64 81 100	16 -21 -15 -10 -6
5 -15 -11 -7 -3	11 2 3 5 9 17	17 2 6 12 20
6 10.0 10.1 10.3 10.6	12 0.05 0.1 0.15 0.2	18 0.3 0.41 0.53 0.66

EXT: