Sequences and Series – part 1 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Coolmath.com select ALGEBRA select SEQUENCES AND SERIES complete lessons 1-6

lesson 1 p.1

1st question on page - What will the next shape be?

last question on page - What's the next number? \_\_\_\_

p.2 TRY IT: What's the next number? \_\_\_\_

Here's a casual definition: A SEQUENCE is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

an is called \_\_\_\_\_\_\_\_\_

Last question - What would a17 be?

p.3 side question - open a new tab - what was Fibonacci's first name?

Last question - What about the 20th term?

p.4 Can you find the next term?

p.5 1st question - Find the next term:

These three dots mean \_\_\_\_\_\_\_\_\_\_\_\_\_

lesson 2 p 1 last question - 1st 5 terms

p2 write the official Fibonacci formula

explain an-1 and an-2

p3 your turn - build the sequence \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

lesson 3 p 1 explain difference in sequence and series

draw sigma \_\_\_\_\_

why is it used for series? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

p2 explain the parts of sigma notation

p3 last question - what numbers were added to get the 36?

p4 try it #1 \_\_\_\_\_ #2 \_\_\_\_\_

p5 draw the symbol for infinity

last question - Does this guy generate ALL the odds? \_\_\_

p6 try it #1 \_\_\_ #2 \_\_\_

lesson 5 p1 arithmetic sequences change by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

We called this number the \_\_\_\_\_\_\_\_\_\_\_\_\_

p3 your turn - find the difference \_\_\_\_

p4 a50 = \_\_\_\_\_ a100 = \_\_\_\_\_

p5 a2000 = \_\_\_\_\_

p6 a52= \_\_\_\_\_ a117 = \_\_\_\_\_

write the official arithmetic sequence formula

your turn d= \_\_\_\_\_ a39=\_\_\_\_\_ a100=\_\_\_\_\_

lesson 6 p1 side problem - open a new tab who was/is Wile E. Coyote?

what is the sum of the integers 1 to 100

p2 how did Gause find the sum?

try it #1 \_\_\_\_ #2 \_\_\_\_

p4 write the arithmetic series formula

p5 what is s50 \_\_\_\_\_

your turn #1 \_\_\_\_\_ #2 \_\_\_\_\_

p6 what is the most common mistake

p7 your turn \_\_\_\_\_\_

lesson 7 p2 your turn - find the ratio

p4 last question - So, what's the formula for the nth term?

p5 write the general formula for a geometric sequence

try it 11th term = \_\_\_\_\_\_

lesson 8 p1 try it sigma notation

p2 write the geometric series formula

try it sum = \_\_\_\_

p3 for an infinite sum to have a finite answer

The ratio must be between -1 and 1. The math way to say this is \_\_\_\_\_\_\_\_\_\_

write the infinite series formula

p5 By the way, when | r | < 1 and we CAN find the sum, the series is called \_\_\_\_\_\_\_\_\_\_

p6 your turn (top of page) sum = \_\_\_\_\_\_

your turn (bottom of page) #1 \_\_\_\_\_\_ #2 \_\_\_\_\_