

BADGE – Equations of Arithmetic Sequences

Write the explicit and recursive equation for the following sequences

1) 2, 7, 12, 17, 22

2) 8, -1, -10, -19, -28...

BADGE – Equations of Geometric Sequences

Write the explicit and recursive equation for the following sequences

1) 9, 27, 81, 243

2) 256, 64, 16, 4

BADGE – Finding any term

Find the 10th term in the following sequences

1) -20, -17, -14, -11....

2) 5, 19, 33, 47, 61

3) 2, 4, 8, 16, 32

BADGE – Writing a sequence given an equation

Write 4 terms for each sequence given the equations below. Label each term with a term number above it

1) $y = 3x + 5$

2) $y = 2(3)^x$

3) $y = 96\left(\frac{1}{2}\right)^x$

BADGE – Describe the following
vocabulary/answer the questions

- 1) Arithmetic
- 2) Geometric
- 3) Exponential
- 4) Linear
- 5) What are the two purposes of the explicit formula?
- 6) How do you find the y-intercept in a sequence list
(ex 4, 6, 8, 10...)
- 7) What are the differences in the way the graphs look for an arithmetic vs geometric sequence?
- 8) What is the difference between growth and decay?
What type of sequence do these vocabulary terms relate to?