

**A** Below is a sequence of numbers. Can you find the next two numbers in the sequence? Is this sequence linear?

3, 7, 11, 15, 19, \_\_\_\_\_, \_\_\_\_\_

**B** Below is a different sequence. Can you find the next two expressions in this sequence? Is this sequence linear?

$a^0, 2a^1, 4a^2, 8a^3,$

\_\_\_\_\_, \_\_\_\_\_

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**C** What is the value of G when k=8?

$$G = \frac{5k+16}{k}$$

**D** Can you derive an expression for the total value of t?

4						10	11
16			18	19	20	22	23
28				31		34	35
40				43		46	47
52						59	60
64	65	66	67	68	69	70	71

**JMC** How many of the first ten numbers can be written as the sum of 3 squares?