From Pattern Drawings to Equations: A Visual Algebra Worksheet

Worked example / complete source key

A dot pattern shows term 1 with 5 dots, term 2 with 8 dots, and term 3 with 11 dots. Write the equation and predict the 10th term.

Answer: The constant change is 3 because 8 minus 5 equals 3 and 11 minus 8 equals 3. Term 0 is 5 minus 3, which is 2. The equation is y = 3x + 2. The 10th term is 3 times 10 plus 2, which equals 32 dots.