

Finding the n th term of a quadratic sequence – worksheet

[For instructions see the video at <http://www.waldomaths.com/video/QuadSeq01/QuadSeq01.jsp>]

The quadratic sequence S has general(n th) term: $an^2 + bn + c$

Write the sequence S here:

$S =$

1^{st} diff. =

2^{nd} diff. =

[At this point these 2nd differences should all be the same. If not the sequence is not quadratic]

$a = 2\text{nd difference} \div 2$, so $a =$ $\div 2 =$

$an^2 =$

$S - an^2 =$

1^{st} diff. =

[At this point these 1st differences should all be the same. If not the sequence is not linear]

$b = 1\text{st difference}$, so $b =$

$bn =$

$S - an^2 - bn =$

[At this point these numbers should all be the same. They are the constant term.]

$c = \text{constant term}$, so $c =$

The sequence S has n th term: n^2 n