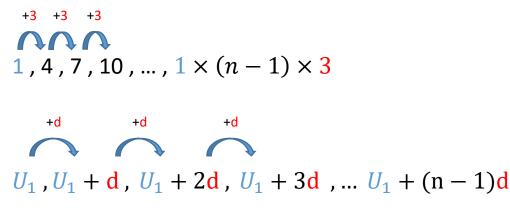
Arithmetic Sequences

An arithmetic sequence has a common difference



The nth term of an arithmetic sequence , $U_{
m n} = U_1 + ({
m n}-1){
m d}$

Series

A series is formed when we add terms together: 1 + 4 + 7 + 10

We can find the sum of this series using the formulae

$$S_n=rac{n}{2}(U_1+U_{
m n}),$$
 useful when we know $U_{
m n}$
 $S_n=rac{n}{2}(2U_1+(n-1)d),$ useful when we don't know $U_{
m n}$

Solving Problems with GDC

You can make good use of your graphical calculator to find out how many terms there are in a sequence. The table function is particularly useful:

| NORMAL FLOAT AUTO REAL RADIAN MP 👖 | NORMAL Press + P | | JTO REAL | RADIAN | MP | |
|--|---|--|----------|--------|----|--|
| Plot1 Plot2 Plot3 NY1 = X/2(2*28+(X-1)*(-3) NY2= NY3= NY4= NY5= NY6= NY7= NY8= NY9= | X 11 12 13 14 15 16 17 18 19 20 21 X=20 | Y1 143 138 130 105 88 68 45 19 -10 -42 | | | | |

