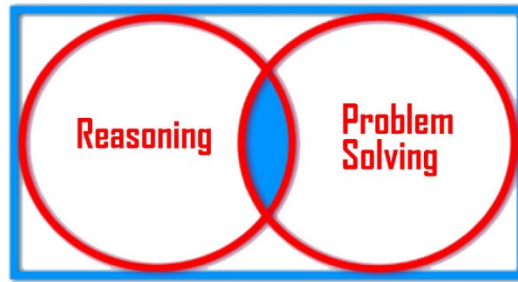


## GCSE Foundation (5 – 1)



[fluidmaths.co.uk](http://fluidmaths.co.uk)

### Mathematical Reasoning Questions

#### (Sequences) – Set 1

**The marks shown are for guidance purposes only  
[Total marks: 27 Marks]**

1	<p>Choose the expression for the Nth term of the sequence below  19, 16, 13, 10, ...</p> <p>a) <math>3n + 19</math>  b) <math>19 - 3n</math>  c) <math>22 - 3n</math>  d) <math>3n + 22</math></p> <p style="text-align: right;"><b>[1Mark]</b></p>
2	<p>The Nth term of a sequence is given as <math>1.5n + 3</math>  Choose all the terms which are <b>not</b> in this sequence</p> <p>a) 5.5  b) 6.0  c) 7.5  d) 8.0</p> <p style="text-align: right;"><b>[2Marks]</b></p>
3	<p>The Nth term of a sequence is <math>5n - c</math>  Choose all the terms which are in the sequence</p> <p>a) <math>5 - c</math>  b) <math>5 + c</math>  c) <math>15 + c</math>  d) <math>15 - c</math></p> <p style="text-align: right;"><b>[2Marks]</b></p>



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The first and second terms of a sequence are 1 and  $x$  respectively. After the first two terms, all the other terms in the sequence are obtained by adding the previous two terms. The 6<sup>th</sup> term of the sequence is 43. Find the value of  $x$ .

**[3Marks]**



8 The  $N^{\text{th}}$  term of a sequence is given as  $3an + 2a$

a) Find the first 3 terms of the sequence

**[3Marks]**

b) The 10<sup>th</sup> term in the sequence is 70. Find the value of  $a$

**[2marks]**

<p>9</p> 	<p>The first term of a sequence is 750.  Each new term in the sequence is obtained by dividing the previous term by 2 and then subtracting 15.  What is the 5<sup>th</sup> term?</p> <p>a) 67.5  b) 18.75  c) -5.625  d) -17.8125</p> <p style="text-align: right;"><b>[1Mark]</b></p>
<p>10</p> 	<p>The Nth term of a quadratic sequence is <math>an^2 + an - a</math>  where <math>a</math> is a constant</p> <p>a) The first term of the sequence is</p> <p>i) <math>3a^2</math>  ii) <math>3a</math>  iii) <math>2a</math>  iv) <math>2a^2</math></p> <p>b) The 6<sup>th</sup> term of the sequence is 82  Find the value of <math>a</math></p> <p>c) Calculate the 10<sup>th</sup> term of the sequence</p> <p style="text-align: right;"><b>[1Mark]</b>  <b>[2Marks]</b> <b>[2Marks]</b></p>