Name: Teacher: Class:

**8.3 Pattern Sniffing**

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| --- | --- | --- |
| **You need to learn to:** | **Pre-learning assessment** | **Post-learning assessment** |
| 1. Generate a sequence from a term-to-term rule
 | *1,2,3* | *1,2,3* |
| 1. Understand the meaning of a position-to-term rule
 | *1,2,3* | *1,2,3* |
| 1. Use a position-to-term rule to generate a sequence
 | *1,2,3* | *1,2,3* |
| 1. Find the position-to-term rule for a given sequence
 | *1,2,3* | *1,2,3* |
| 1. Use algebra to describe the position-to-term rule of a linear sequence (the nth term)
 | *1,2,3* | *1,2,3* |
| 1. Use the nth term of a sequence to deduce if a given number is in a sequence
 | *1,2,3* | *1,2,3* |
| 1. Find the next three terms in any Fibonacci type sequence
 |  |  |

**Assessments**

|  |  |  |
| --- | --- | --- |
| Assessment | What score **I think** I’ll get out of 40(complete **before** assessment) | What score **I did** get out of 40(complete **after** assessment) |
| Diagnosis assessment | /25 = % | /25 = % |
| Test assessment | /25 = % | /25 = % |

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**8.3 Pattern Sniffing**

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**Assessments**

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| Diagnosis assessment | /25 = % | /25 = % |
| Test assessment | /25 = % | /25 = % |

**8.3 Pattern Sniffing** Date:

**Diagnosis (to be taken before the topic is taught)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Question n.o.** | **Question** | **Workings and answer** | Macintosh HD:private:var:folders:65:l364j7q962v4_xf3302b347w0000gn:T:TemporaryItems:imgres.jpg |
| 1 | Write the first four terms of the following sequences:-1. First term 4

Term to term rule +51. First term 11

Term to term rule -31. First term 8.2

Term to term rule -0.1 |  | (3) |
| 2 | Write a definition of the following:-1. Term
2. Position
3. Position to term rule
4. Linear sequence
 |  | (4) |
| 3 | Write the first 4 terms of the following sequences:-1. 3n + 2
2. 4n – 3
3. 10 – 2n
4. -4 + 3n
 |  | (4) |
| 4 | Describe the position to term rule for each sequence1. 35, 39, 43, 47, …
2. 59, 56, 53, 50, …
3. -8, -6, -4, -2, …..
4. 1.25, 1.5, 1.75, 2, ….
 |  | (4) |
| 5 | Write the nth term rule for each sequence1. 35, 39, 43, 47, …
2. 59, 56, 53, 50, …
3. -8, -6, -4, -2, …..
4. 1.25, 1.5, 1.75, 2, ….
 |  | (4) |
| 6 | Use the nth term rule to:- 1. Find the 50th term in the sequence 35, 39, 43, 47, …
2. Decide if 152 is in the sequence 55, 58, 61, 64, …
3. Decide if -54 is in the sequence 10 , 7 , 4 , 1 , …
 |  | (3) |
| 7 | Generate the first 5 terms of a Fibonacci style sequence with the following first two terms:-1. 3 , 8 , ….
2. 9 , 1 , ….
3. 5 , -3 , ….
4. -5 , 11 , ….
 |  | (3) |

**8.3 Pattern Sniffing** Date:

**Test (to be taken after the topic is taught)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Question n.o.** | **Question** | **Workings and answer** | Macintosh HD:private:var:folders:65:l364j7q962v4_xf3302b347w0000gn:T:TemporaryItems:imgres.jpg |
| 1 | Write the first four terms of the following sequences:-1. First term 19

Term to term rule +41. First term 23

 Term to term rule -91. First term 6.3;

Term to term rule -0.2 |  | (3) |
| 2 | Write a definition of the following:-1. Term
2. Position
3. Position to term rule
4. Linear sequence
 |  | (4) |
| 3 | Write the first 4 terms of the following sequences:-1. 5n + 7
2. 2n – 3
3. 8 – 3n
4. -6 + 4n
 |  | (4) |
| 4 | Describe the position to term rule for each sequence1. 23, 29, 35, 41, …
2. 23, 19, 15, 11, …
3. -4, -11, -18, -25, …..
4. 3.2 , 3.5 , 3.8 , 4.1, ….
 |  | (4) |
| 5 | Write the nth term rule for each sequence1. 23, 29, 35, 41, …
2. 23, 19, 15, 11, …
3. -4, -11, -18, -25, …..
4. 3.2 , 3.5 , 3.8 , 4.1, ….
 |  | (4) |
| 6 | Use the nth term rule to:- 1. Find the 50th term in the sequence 23, 29, 35, 41, …
2. Decide if 152 is in the sequence 15, 18, 21, 24, …
3. Decide if -151 is in the sequence 9 , 5 , 1 , -3 , …
 |  | (3) |
| 7 | Generate the first 5 terms of a Fibonacci style sequence with the following first two terms:-1. 7 , 11 , ….
2. 8 , 2 , ….
3. 8 , -5 , ….
4. -3, 7 , ….
 |  | (3) |