Name: Teacher: Class:

**8.1 Numbers and the Number System**

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| **You need to learn to:** | **Pre-learning assessment** | **Post-learning assessment** |
| 1. Recall prime numbers up to 100 | *1,2,3* | *1,2,3* |
| 2. Define a prime factor | *1,2,3* | *1,2,3* |
| 3. Know divisibility tests for integers up to 12 | *1,2,3* | *1,2,3* |
| 4. Write a number as the product of its prime factors | *1,2,3* | *1,2,3* |
| 5. Use Venn Diagrams to find HCF of two numbers | *1,2,3* | *1,2,3* |
| 6. Use Venn diagrams to find LCM of two numbers | *1,2,3* | *1,2,3* |
| 7. Round any number to 1 significant figure | *1,2,3* | *1,2,3* |
| 8. Write numbers in standard form | *1,2,3* | *1,2,3* |
| 9. I can interpret numbers in standard form (recognise approximate answers of scale) | *1,2,3* | *1,2,3* |
| 10. I can calculate negative and fractional indices | *1,2,3* | *1,2,3* |

**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 | /30 = % | /30 = % |
| Test assessment | /30 = % | /30 = % |

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**8.1 Numbers and the Number System** 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 down all the prime numbers between 40 and 60  |  | (5) |
| 2 | Write the definition of a prime number.  |  | (1) |
| 3 | Describe how you can test if a number is divisible by1. 3
2. 7
3. 8
4. 11
 |  | (4) |
| 4 | 1. Write 90 as a product of its prime factors.
2. Write 420 as a product of its prime factors
 |  | (2) |
| 5 | Use a Venn diagram to find 1. the highest common factor of 90 and 420
2. the lowest common multiple of 90 and 420
 |  | (2) |
| 6 | Round the following to 1 significant figure1. 234
2. 729.98
3. 0.376
4. 0.0652
5. 0.000952
 |  | (5) |
| 7 | Explain how you write a number in standard form. |  | (1) |
|   8 | Convert the following to standard form32400006700000000.0003620.000000070654.3 x 104 |  | (6) |
| 9 | The population of England is approximately a)5.3 x 102b) 5.3 x 107c) 5.3 x 1020d)5.3 x 1017The size of a pin head is approximately  a)1.5 x10-9 m b) 1.5 x 10-1 mc)1.5 x 10-3 md)1.5 x 10-6 m |  | (2) |
| 10 | Calculate1. 6-2
2. 491/2
3. 64-1/2
 |  | (3) |

**8.1 Numbers and the Number System** 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 down all the prime numbers between 70 and 90  |  | (5) |
| 2 | Write the definition of a prime number.  |  | (1) |
| 3 | Describe how you can test if a number is divisible by1. 6
2. 7
3. 12
4. 11
 |  | (4) |
| 4 | 1. Write 126 as a product of its prime factors.
2. Write 84 as a product of its prime factors
 |  | (2) |
| 5 | Use a Venn diagram to find 1. the highest common factor of 84 and 126
2. the lowest common multiple of 84 and 126
 |  | (2) |
| 6 | Round the following to 1 significant figure1. 574
2. 759.32
3. 0.409
4. 0.06052
5. 0.000352
 |  | (5) |
| 7 | Explain how you write a number in standard form. |  | (1) |
|   8 | Convert the following to standard form84000045600000000.0006920.0000000606543.3 x 10-5 |  | (6) |
| 9 | The number of days in a year is approximatelya)5.3 x 102b) 5.3 x 105c) 5.3 x 1020d)5.3 x 1017The weight of a bag of sugar is approximately a)1.5 x107 m b) 1.5 x 103 mc)1.5 x 101 md)1.5 x 1010 m |  | (2) |
| 10 | Calculate1. 2-5
2. 811/2
3. 144-1/2
 |  | (3) |