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 by   1. 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 figure   1. 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 form  3240000  670000000  0.000362  0.0000000706  54.3 x 104 |  | (6) |
| 9 | The population of England is approximately  a)5.3 x 102  b) 5.3 x 107  c) 5.3 x 1020  d)5.3 x 1017  The size of a pin head is approximately    a)1.5 x10-9 m  b) 1.5 x 10-1 m  c)1.5 x 10-3 m  d)1.5 x 10-6 m |  | (2) |
| 10 | Calculate   1. 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 by   1. 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 figure   1. 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 form  840000  4560000000  0.000692  0.0000000606  543.3 x 10-5 |  | (6) |
| 9 | The number of days in a year is approximately  a)5.3 x 102  b) 5.3 x 105  c) 5.3 x 1020  d)5.3 x 1017  The weight of a bag of sugar is approximately  a)1.5 x107 m  b) 1.5 x 103 m  c)1.5 x 101 m  d)1.5 x 1010 m |  | (2) |
| 10 | Calculate   1. 2-5 2. 811/2 3. 144-1/2 |  | (3) |