Name: Teacher: Class:

**6.1 Numbers and the Number System**

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| **You need to learn to:** | **Pre-learning assessment** | **Post-learning assessment** |
| 1. Read and write numbers up to 10 000 000 | *1,2,3* | *1,2,3* |
| 2. Compare numbers up to 10 000 000 | *1,2,3* | *1,2,3* |
| 3. Determine the value of each digit up to 10 000 000 | *1,2,3* | *1,2,3* |
| 4. State the value of a digit up to 3 decimal places | *1,2,3* | *1,2,3* |
| 5. Round numbers up to 3 decimal places | *1,2,3* | *1,2,3* |
| 6. Use negative numbers in context | *1,2,3* | *1,2,3* |
| 7. Calculate intervals across 0 | *1,2,3* | *1,2,3* |
| 8. Order negative numbers | *1,2,3* | *1,2,3* |
| 9. Identify types of number (square, prime, factor, multiple) | *1,2,3* | *1,2,3* |
| 10. Identify common factors and multiples of numbers (2 or more) | *1,2,3* | *1,2,3* |
| 11. Identify and define a prime number | *1,2,3* | *1,2,3* |
| 12. To be able to test if a number is prime | *1,2,3* | *1,2,3* |
| 13. Multiply and divide whole numbers by 10, 100, 1000 | *1,2,3* | *1,2,3* |
| 14. Multiply and divide decimals by 10, 100, 1000 | *1,2,3* | *1,2,3* |
| 15. Convert numbers (up to 16) to and from Binary | *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 | /40 = % | /40 = % |
| Test assessment | /40 = % | /40 = % |

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**6.1 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 | 1. Write the number 327 043 in words
2. Write the number 3 million, twenty three thousand, four hundred and six.

  |  | (2) |
| 2 | Put the following numbers in order from smallest to largest.303 508 ; 289, 599 ; 11 658 752; 998 889 ; 11 700 000 ; 93 234  |  | (1) |
| 3 | Write the value of the underlined digit in each number.1. 4**3**2 567
2. 34 **5**67
3. **2**6 235 143
 |  | (3) |
| 4 | Write the value of the underlined digit in each number.1. 34.**6**8
2. 239.3**7**54
3. 0.00**8**
 |  | (3) |
| 5 | Round the following1. 3.645 to 1 d.p
2. 22.7438 to 2dp
3. 36.36782 to 3dp
 |  | (3) |
| 6 | The temperature in a freezer is lowered by 2 degrees. If the starting temperature is -3o, what is temperature after the decrease? |  | (1) |
| 7 | Evaluate 1. 13 – 8
2. 4 – 9
3. 1 – 10
4. 24 - 30
 |  | (4) |
| 8 | Put the following numbers in order from smallest to largest:-7, -5, 3, -11, 5, -9, 0  |  | (1) |
| 9 | From the list of numbers3, 6, 8, 12, 15, 28, 36, 40Write down1. A factor of 40
2. A prime number
3. A square number
4. A multiple of 7
 |  | (4) |
| 10 | 1. Write down a common factor of 12 and 15.
2. Write down a common multiple of 12 and 10
 |  | (2) |
| 11 | Complete the sentence7 (is/ is not) a prime number because ….. |  | (1) |
| 12 | Show that 51 (is/ is not) prime |  | (1) |
| 13 | Calculate1. 34 x 100
2. 36000 ÷ 100
3. 585 ÷ 10
4. 357 x 1000
 |  | (4) |
| 14 | Calculate1. 3.65 x 10
2. 864.65 ÷ 100
3. 8.04 x 1000
4. 5.05 ÷ 1000
 |  | (4) |
| 15 | Convert the following numbers to Binary1. 6
2. 5
3. 15

Convert the following Binary numbers to base 10.1. 1010
2. 0100
3. 1001
 |  | (6) |

**6.1 Numbers and the Number System** Date:

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

|  |  |  |  |
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| **Question n.o.** | **Question** | **Workings and answer** | Macintosh HD:private:var:folders:65:l364j7q962v4_xf3302b347w0000gn:T:TemporaryItems:imgres.jpg |
| 1 | 1. Write the number 4 205 470 in words
2. Write the number four hundred and twenty three thousand, seven hundred and six.

  |  | (2) |
| 2 | Put the following numbers in order from smallest to largest.843 508 ; 689, 509 ; 10 458 762; 998 889 ; 11 308 045 ; 89 284  |  | (1) |
| 3 | Write the value of the underlined digit in each number.1. 432 **5**67
2. **3**4 567
3. 2**6** 235 143
 | a) b) | (3) |
| 4 | Write the value of the underlined digit in each number.1. 34.6**8**
2. 239.**3**754
3. 0.045**6**
 |  | (3) |
| 5 | Round the following1. 23.3497 to 1 dp
2. 28.863 to 2dp
3. 43.3678 to 3dp
4. 54.995 to 2 dp
 |  | (3) |
| 6 | The temperature in a freezer is lowered by 4 degrees. If the starting temperature is -6o, what is temperature after the decrease? |  | (1) |
| 7 | Evaluate 1. 3 – 7
2. 2 – 13
3. 34 - 50
 |  | (4) |
| 8 | Put the following numbers in order from smallest to largest:-5, -7, 11, -3, 9, -5, 0  |  | (1) |
| 9 | From the list of numbers 6, 7, 11, 12, 27, 28, 49, 40Write down1. A factor of 28
2. A prime number
3. A square number
4. A multiple of 9
 |  | (4) |
| 10 | 1. Write down a common factor of 18 and 24.
2. Write down a common multiple of 6 and 15
 |  | (2) |
| 11 | Complete the sentence1 is/ is not a prime number because ….. |  | (1) |
| 12 | Show that 127 is/ is not prime |  | (1) |
| 13 | Calculate1. 56 x 100
2. 78000 ÷ 100
3. 486 ÷ 10
4. 963 x 1000
 |  | (4) |
| 14 | Calculate1. 763.65 ÷ 100
2. 34.04 x 1000
3. 7.09 ÷ 1000
 |  | (4) |
| 15 | Convert the following numbers to Binary1. 4
2. 9
3. 11

Convert the following Binary numbers to base 10.1. 0110
2. 1010
3. 1001
 |  | (6) |