Name: Teacher: Class:

**6.2 Calculating**

|  |  |  |
| --- | --- | --- |
| **You need to learn to:** | **Pre-learning assessment** | **Post-learning assessment** |
| 1. Complete mental calculations including large numbers | *1,2,3* | *1,2,3* |
| 2. Identify what operations are needed to solve a problem | *1,2,3* | *1,2,3* |
| 3. Solve addition and subtraction multi step problems | *1,2,3* | *1,2,3* |
| 4. Apply BIDMAS to calculations | *1,2,3* | *1,2,3* |
| 5. Multiply a 2 digit by single digit number mentally | *1,2,3* | *1,2,3* |
| 6. Multiply 4 digit by 2 digit numbers | *1,2,3* | *1,2,3* |
| 7. **Recall** **ALL** multiplication and division facts up to 12 x 12 | *1,2,3* | *1,2,3* |
| 8. Know at least two written methods of multiplication | *1,2,3* | *1,2,3* |
| 9. Know at least two written methods of division | *1,2,3* | *1,2,3* |
| 10. Divide large numbers using formal methods where answers are not integers. | *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 = % |

Name: Teacher: Class:

**6.2 Calculating**

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| **You need to learn to:** | **Pre-learning assessment** | **Post-learning assessment** |
| 1. Complete mental calculations including large numbers | *1,2,3* | *1,2,3* |
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**Assessments**

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| Diagnosis assessment | /30 = % | /30 = % |
| Test assessment | /30 = % | /30 = % |

Mental arithmetic questions “Diagnosis”

To be read to students

a) 4559 + 237

b) 5 x 72

c) 532 – 44

d) 85 x 6

e) 5738 - 853

Times table questions (to be read at a pace of one every 2 seconds – explicitly tell the students we are testing recall not calculation)

3 x 7

4 x 8

3 x 9

12 x 8

6 x 8

11 x 3

7 x 8

9 x 6

7 x 6

8 x 8

Mental arithmetic questions “Test”

To be read to students

a) 3549 + 472

b) 6 x 56

c) 428 – 36

d) 73 x 6

e) 7583 – 856

Times table questions (to be read at a pace of one every 2 seconds – explicitly tell the students we are testing recall not calculation)

3 x 7

4 x 8

3 x 9

12 x 8

6 x 8

11 x 3

7 x 8

9 x 6

7 x 6

8 x 8

**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 | Complete the questions read out by your teacher. You are to solve these mentally with no working out shown.  a)  b)  c)  d)  e) | a)  b)  c)  d)  e) | (5) |
| 2 | 5 pens cost £3.80.  Write down the calculations I can use to find out how much 9 pens would cost. |  | (1) |
| 3 | A car travels 25 miles in 40 minutes.   1. Write down the calculation to find its speed in miles per minute. 2. Write down a calculation to find its speed in miles per hour. |  | (2) |
| 4 | A storeroom can hold 300 boxes.  On Sunday there are 280 boxes in the storeroom.  On Monday 28 boxes are removed.  On Tuesday 41 boxes are delivered.  How many more boxes can be put in the storeroom on Wednesday before it is full? |  | (1) |
| 5 | Calculate the following   1. 3 + 5 x 6 = 2. 8 x 32 = 3. 4 x (3 + 9)2 = 4. 7 + 12 ÷ 3 = 5. 4 x (3 + 1)2 =   82 | a)  b)  c)  d)  e) | (5) |
| 6 | Calculate the following. You must use a different strategy for each question. (your working out is set out in a different way for each)   1. 74 x 358 2. 653 x 279 3. 5224 8 4. 3760 ÷ 16 |  | (4) |
| 7 | Number Dash  Complete the following ‘quick fire’ times table questions.  a)  b)  c)  d)  e)  f)  g)  h)  i)  j) | a)  b)  c)  d)  e)  f)  g)  h)  i)  j) | (10) |
| 8 | Calculate   1. 2754 ÷ 18 = 2. 279 ÷ 12 |  | (2) |

**6.1 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 | Complete the questions read out by your teacher. You are to solve these mentally with no working out shown.  a)  b)  c)  d)  e) | a)  b)  c)  d)  e) | (5) |
| 2 | 12 pens cost £8.40.  Write down the calculations I can use to find out how much 5 pens would cost. |  | (1) |
| 3 | A car travels 30 miles in 50 minutes.   1. Write down the calculation to find its speed in miles per minute. 2. Write down a calculation to find its speed in miles per hour. |  | (2) |
| 4 | A bus can seat 60 passengers when full. At the start of a journey it has 38 passengers on it.  At one bus stop 17 people get off and 23 people get on.  How many more people can get on before the bus is full? |  | (1) |
| 5 | Calculate the following   1. 3 + 5 x 6 = 2. 8 x 32 = 3. 4 x (3 + 9)2 = 4. 7 + 12 ÷ 3 = 5. 4 x (3 + 1)2 =   82 | a)  b)  c)  d)  e) | (5) |
| 6 | Calculate the following. You must use a different strategy for each question. (your working out is set out in a different way for each)   1. 58 x 427 2. 363 x 847 3. 4445 7 4. 6001 ÷ 17 | a)  b)  c)  d) | (4) |
| 7 | Number Dash  Complete the following ‘quick fire’ times table questions.  a)  b)  c)  d)  e)  f)  g)  h)  i)  j) | a)  b)  c)  d)  e)  f)  g)  h)  i)  j) | (10) |
| 8 | Calculate   1. 5658 ÷ 23 = 2. 6252 ÷ 15 |  | (2) |