Name: Teacher: Class:

**8.2 Calculating**

|  |  |  |
| --- | --- | --- |
| **You need to learn to:** | **Pre-learning assessment** | **Post-learning assessment** |
| 1. Add and subtract with negative numbers | *1,2,3* | *1,2,3* |
| 2. Multiply and divide with negative numbers | *1,2,3* | *1,2,3* |
| 3. Apply BIMDAS to calculations with negative numbers | *1,2,3* | *1,2,3* |
| 4. Apply BIDMAS to calculations involving decimals | *1,2,3* | *1,2,3* |
| 5. Square a 2 digit number mentally | *1,2,3* | *1,2,3* |
| 6. Multiply 3 digit by 3 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 and be able to apply to decimals. | *1,2,3* | *1,2,3* |
| 9. Know at least two written methods of division and be able to apply to decimals | *1,2,3* | *1,2,3* |
| 10. Divide any large number using formal methods where answers are not integers showing the answer as either a fraction or decimal | *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 = % |

Name: Teacher: Class:

**8.2 Calculating**

|  |  |  |
| --- | --- | --- |
| **You need to learn to:** | **Pre-learning assessment** | **Post-learning assessment** |
| 1. Add and subtract with negative numbers | *1,2,3* | *1,2,3* |
| 2. Multiply and divide with negative numbers | *1,2,3* | *1,2,3* |
| 3. Apply BIMDAS to calculations with negative numbers | *1,2,3* | *1,2,3* |
| 4. Apply BIDMAS to calculations involving decimals | *1,2,3* | *1,2,3* |
| 5. Square a 2 digit number mentally | *1,2,3* | *1,2,3* |
| 6. Multiply 3 digit by 3 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 and be able to apply to decimals. | *1,2,3* | *1,2,3* |
| 9. Know at least two written methods of division and be able to apply to decimals | *1,2,3* | *1,2,3* |
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**Assessments**

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| 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 = % |

Mental arithmetic questions “Diagnosis”

To be read to students

5)

a) 182

b) 272

b) 342

c) 732

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

9 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

5)

a) 162

b) 252

b) 372

c) 562

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

9 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

**8.2 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 | Calculate the following  a) -43 + 10  b) 25 - 37  c) 638 - (-27)  d) -35 – (-68)  e) negative 7 plus negative 5  f) 17 minus negative 15 | a)  b)  c)  d)  e)  f) | (6) |
| 2 | Calculate the following  a) -8 x 15  b) 78 ÷ -6  c) -14 x -8  d) -63 ÷ 9  e) -5.6 ÷ 0.7 | a)  b)  c)  d)  e) | (5) |
| 3 | Calculate the following   1. 4 + 5 x (-3) 2. -6 – 15 ÷ (-3) 3. (-3)2 x -7 | a)  b)  c) | (3) |
| 4 | Calculate the following   1. 70 – 4.25 x 4 2. 5.5 + 0.52 3. (2.5 – 0.52) x 6 4. 100 x (0.3 + 0.1)2 =   82 | a)  b)  c)  d) | (4) |
| 5 | Square the numbers read out by your teacher. Do not write down any working out. | a)  b)  c)  d) | (4) |
| 6 | Calculate the following. You must show your working out.   1. 27.2 x 385 2. 65.3 x 87.9 3. 85.6 12 4. 376 ÷ 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 | Complete the following showing the remainder as a fraction   1. 3254 ÷ 17 2. 4150 ÷ 13   Complete the following showing the remainder as a decimal   1. 37 ÷ 15 = 2. 21 ÷ 99 = | a)  b)  c)  d) | (4) |

**8.2 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 | Calculate the following  a) -57 + 14  b) 37 - 56  c) 438 - (-64)  d) -59 – (-53)  e) negative 14 plus negative 28  f) 23 minus negative 57 | a)  b)  c)  d)  e)  f) | (6) |
| 2 | Calculate the following  a) -6 x 25  b) 132 ÷ 11  c) -14 x -8  d) -56 ÷ 8  e) -8.4 ÷ -0.7 | a)  b)  c)  d)  e) | (5) |
| 3 | Calculate the following   1. 4 + 5 x (-7) 2. -18 – 36 ÷ (-3) 3. (-3)2 x (–7)2 | a)  b)  c) | (3) |
| 4 | Calculate the following   1. 56 – 3.25 x 8 2. 2.5 + 0.52 3. (7.5 – 0.52) x 100 4. 100 x (0.6 + 0.2)2 =   82 | a)  b)  c)  d) | (4) |
| 5 | Square the numbers read out by your teacher. Do not write down any working out. | a)  b)  c)  d) | (4) |
| 6 | Calculate the following. You must show your working out.   1. 42.6 x 325 2. 63.5 x 7.98 3. 85.32 24 4. 378 ÷ 18 |  | (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 | Complete the following showing the remainder as a fraction   1. 4154 ÷ 14 2. 2755 ÷ 16   Complete the following showing the remainder as a decimal   1. 5 ÷ 9 = 2. 23 ÷ 99 = | a)  b)  c)  d) | (4) |