**MEMORANDUM**

**CONTENT AREA: NUMBERS, OPERATIONS & RELATIONSHIPS**

**RECOGNISE, REPRESENT, DESCRIBE AND COMPARE WHOLE NUMBERS TO AT LEAST 9-DIGITS.**

1. **Expanded Notation:**

**1.1 35 057**

**1.2 6 000 000**

**1.3 (3 × 1 000 000) + (5 × 100 000) + (6 × 10 000)**

**1.4 42 631 627 = (4 x 10 000 000) + (2 x 1 000 000) + (6 x 100 000) + (3 x 10 000) +**

 **(1 x 1 000) + (6 x 100) + (2 x 10) + (7x1)**

**2. Write numbers to word or words to numbers:**

**2.1 C. 359 803**

**2.2 2 385 749**

**2.3 234 709 = Two hundred and thirty four thousand seven hundred and nine.**

* 1. **4 283 164**

**3.Counting and Ordering of numbers:**

**3.1 19 234 556; 3 999 672**

**3.2 24 050**

**3.3 413 123 342 123 212 143 123 243**

**3.4 athletics**

**3.5 23 475**

**3.6 459 342 109**

**3.7 C. R788 210**

**4. RECOGNISE PRIME NUMBERS TO AT LEAST 100.**

**4.1 D 13**

**4.2 29, 31**

**4.3 91**

**4.4.1 57; 61**

**4.4.2 5**

**4.5 5 and 11**

**4.6 29**

**4.7 19**

**5. RECOGNISE THE PLACE VALUE OF WHOLE NUMBERS TO AT LEAST 9-DIGIT**

 **NUMBERS.**

**5.1 a) 3 b) 300 000**

**5.2 C. 4 x 1 000 000**

**5.3 A. Hth**

**5.4 C. 23,007**

**5.5 B. 1 000 000**

**5.6 20 000 000**

**5.7 TM**

**5.8 1 475 890**

**5.9 a) 50 000 000 b) 300 000**

**5.10 3, 36**

**6. ROUND OFF TO THE NEAREST 5, 10, 100, 1000, 100 000 or 1 000 000**

**6.1 36 235**

**6.2 10 350**

**6.3 1 208 367**

**6.4 24 100**

**6.5 (Eg.) 338, 341, etc…**

**6.6 R46,35**

**6.7 3 650**

**6.8.1 5 685 6.8.2 6 000**

**6.9.1 4 600 6.9.2 5 000**

**7. ADDITION AND SUBTRACTION OF WHOLE NUMBERS**

**7.1 9 836**

**7.2.1 10 372 7.2.2 3 447 7.2.3 98 969 7.2.4 141 302**

**7.3.1 4 629 592 7.3.2. 1 394 762**

**7.4.1 656 873 2 7.4.2. 127 874 3**

**7.5. 5 932**

**7.6 316**

**7.7 106 580 3**

**7.8 114 929 6**

**7.9 3636**

**8. MULTIPLICATION OF A 4-DIGIT NUMBER BY A 2/3-DIGIT NUMBER ( IN COLUMNS):**

**8.1. 915 492**

**8.2 3 095 268**

**8.3.a. 2340 8.3.b. 4680**

**8.4. 471 144**

**8.5. 884**

**8.6. 451 140**

**8.7 Ingrid- 2 6048**

**9. DIVIDE A 4-DIGIT NUMBER BY A 2/3-DIGIT NUMBER (USING LONG DIVISION):**

**9.1. 306**

**9.2.**

**9.3. 165**

**9.4. 12 buses**

**10. RECOGNISE MULTIPLES AND FACTORS OF 2-DIGIT AND 3-DIGIT WHOLE NUMBERS.**

10.1. 120

10.2. 1, 2 , 3, 4, 6, 8, 12, 24

10.3. 1. 36

10.3.2. 2, 3, 5, 6, 15, 30

10.4.1. 8 10.4.2. 96 10.4.3. 1

10.5.1. Yes 10.5.2. No

10.6. 2048; 4096; 8192

10.7 49

10.8. 1, 5, 9, 25, 45, 225

10.9 8

10.10. 63

10.11. 12

**11. PROPERTIES OF WHOLE NUMBERS USING COMMUTATIVE,ASSOCIATIVE AND DISTRIBUTIVE**

11.1. 0

11.2. 0

11.3. 95 ; 95; =

11.4. + 0 =

11.5 1

11.6 1

11.7 True

**12. RECOGNISE AND USE DIVISIBILITY RULES FOR 2, 3, 4, 5, 10, 100, AND 1000.**

12.1. B. 45 – 39 = 39 – 45 D. 20 ÷ 5 =5 ÷ 20

12.2.1 True 12.2.2 True 12.2.3 True

12.3. a. 5; 1; 25

12.4.1. 17 12.4.2. 5

**13. MULTIPLE OPERATIONS WITH WHOLE NUMBERS:**

13.1. 56 13.2. 36 13.3. 6 x (5 + 7)

13.4. 1. 14 13.4. 2 14. 13.4. 3. 4 13.4. 4. 22

13.5. 32 - 4  **÷** 7 = 4

13.6 90

13.7 48 240

13.8 211

**14. PROBLEM SOLVING QUESTIONS**

14.1.1 R2, 05 profit

14.1.2 R137,35

14.1.3 R 7,50 loss

14.2 R225 for a pair of jeans

14.3

14.4 1 500km distance travelled

14.5 R532

14.6 R4,56

14.7 18 litres of petrol

14.8 R 180 for 6 books

14.9.1 679 km

14.9.2 954 km

14.10 R7 236

1. **RECOGNISE AND USE EQUIVALENT FORMS OF NUMBERS INCLUDING:**

**COMMON FRACTIONS; DECIMAL FRACTIONS AND PERCENTAGES**

**15.1 Fractions, Decimal and Percentage**

15.1.1 30%

15.1.2 

15.1.3 75%

15.2 0,5%

15.3 25% and 0,25; 75% and 

* 1. 

15.5 40%

 ; 0,75

15.6 3,8; 0,38; 0,375

15.7

15.8  37,5

  0,5

15.9  ; 

15.10  = 

15.11.1 >

15.11.2 >

15.11.3 =

15.12.1 25%

15.12.2 0,25

15.12.3 

15.13 54%

15.14 

15.15 18

15.16 

15.17 Sam 

15.18 28 vehicles

1. **ADD AND SUBTRACT COMMON FRACTIONS AND MIXED NUMBERS:**

16.1.1 **= **

16.1.2 = 

16.2.1  = 

16.2.2 17 = 18 

16.3.1 4

16.3.2 8

16.4.1 

16.4.2.

16.5. 

16.6 360 learners

16.7. 200

16.8 half of 80 smarties is more

16.9.1 

16.9.2 +  =  is less than full, hence the water will not overflow

1. **COUNT FORWARDS AND BACKWARDS IN DECIMALS TO AT LEAST 2 DECIMAL PLACES**

17.1 B 0, 1

17.2 C 0, 09

17.3 B 9

17.4 9,50

17.5 7, 025

17.6 20; 20,05

17.7 0,45

17,8 0,36

17.9 1,25; 1,50; 1,75

17.10 0,25; 0,5; 0,75; 1; 1,25

17.11 5; 5,2; 5,4; 5,6; 5,8; 6; 6,2; 6,4; 6,6

17.12 1,09; 1,10; 1,11; 1,12

1. **ADD AND SUBTRACT POSITIVE DECIMAL FRACTIONS**

 **MULTIPLY DECIMAL FRACTIONS BY 10 AND 100.**

18.1 32,6

18.2. 53,6

18.3. 2 527

18.4 8,85

18.5 3,66

18.6 6,32

18.7 True

 **CONTENT AREA: PATTERNS, FUNCTIONS AND ALGEBRA**

1. **GEOMETRIC AND NUMERIC PATTERNS:**
	1. B

 1.2

1.3

1.4.

1.4.1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Diagram No | 4 | 5 | 6 | 8 | 10 | 23 | n |
| No. of small squares | 16 | 25 | 36 | 64 | 100 | 529 | nxn/ n2 |

1.4.2 nxn/ n2

1.4.3 square numbers (multiply the no of small numbers by itself)

1.4.4

1. **Number Patterns and Sequence:**
	* 1. **25, 33, 42, 52**
		2. **5, 8, 13, 17, 30**

**2.2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No of squares** | **4** | **5** | **10** | **20** |
| **No of matches** | **13** | **16** | **31** | **61** |

 **2.3.1 29**

 **2.3.2**

 **2.4.1 12**

**2.4.2 9 tables**

**2.4.3 rule: number of tables x 2 + 2 = no of people**

**2.4.4 14 tables**

**2.5 35**

1. **Number Sentences:**

**3.1 7**

**3.2 12**

**3.3 R150 x 5 x 6 = \_\_\_\_\_\_\_\_\_\_\_**

**3.4**

**3.5 12 + 12 – 3 = 21**

**3.6 7 red beads and 11 white beads**

**3.7 53**

**3.8** c. (6 + 2) x 5

**3.9 0**

**3.10 986**

1. **FLOW DIAGRAMS**

**4.1 3**

**4.2 A = 6**

 **B = 44**

**CONTENT AREA:**

 **SPACE AND SHAPE**

**1.Similarities and Differences of the Square, Rectangles and Parallelograms**

**1.1 2-D SHAPES AND 3-D OBJECTS:**

1.1.1 Rectangle

1.1.2 Rectangle

**1.2**

1.2.1 Square

 1.2.2 Rectangle

**1.3 Similarities between a square and a rectangle**

* Both are four sided figures.
* Both have the total sum of angles equal to 360 degrees
* Each angle in both of them measures to 90 degrees
* Opposite sides are equal in both of them
1. **Number of Triangles:**

2.110

 **3. 2D Shapes and 3D Objects:**

3.1. Cylinder, Rectangular Prism, Hexagon and Pentagon.

3.2 Pyramid

3.3 Rectangle, Octagon, Circle and Triangle

3.4 Draw lines to match the following 3D objects to their names.

****

3.5 Complete the following table

****

3.6 Complete the following table

****

3.7. This is a drawing of a box of chocolates.

****

3.7.1 Rectangular Prism

3.7.2 Two

**4. Angles:**

4.1. 180 - 120

 4.2.

**5**. **USE THE PROPERTIES OF ROTATIONS, REFLECTIONS AND TRANSLATION TO DESCRIBE TRANSFORMATIONS OF 2-D SHAPES AND 3-D OBJECTS. TRANSFORMATIONS**

**5.1**

**5.2** What kind of transformation(s) is illustrated in each of the following?

5.2.1Translation

5.2.2Translation

5.2.3Translation

5.2.3 Rotation

**5.3.**

**5.4.** Reflect

1. **RECOGNISE, DRAW AND DESCRIBE LINE(S) OF SYMMETRY IN 2-D SHAPES.**

**6.1. How many lines of symmetry can be drawn in these pictures?**

 **One (1) None (Zero)**

 **6.2. Draw the line(s) of symmetry on the 2 shapes below**



* 1. **B and C**



**7**

**7.1 (i)**

**7.2 (iii)**

**7.3 A**

**7.4 W**

**7.5**

7.6 .1

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **11** |  |  |  |  |  |  |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |  |  |  |  |  |
| **1** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** |

7.6.2 8K

**CONTENT AREA: MEASUREMENT**

**MASS, CAPACITY, LENGTH AND TEMPERATURE:**

**1.1 MASS**

1.1. 1 0,1 grams

1.1.2 3 300g

1.1.3 3,3 Kg

* + 1. 5,7Kg
	1. 5,2 kg

1.3 800kg - Lorry

35 tons - elevator with 78 people

500g - wheel barrow

35kg - handbag

1.4 a) 3 kg = 3 000 g

 b)kg = 250 g

 c) 2 kg 425 g = 2, 425kg

1.5 a) 3 tons = 3 000 kg

 b) 1 kg 25 g = 1,250 kg

1. **LENGTH:**

**2.1** 2 m 88 cm = 2,880 m

2.2.1. 1 m 84 cm as 184 cm

* + 1. 3,569 m to 3 569mm

2.2.3. 345 m to 0, 345 km

2.3 C

2.4 a) 0,5

 b) 1

 c) 

 d) 1,4

* 1. A)11,5 cm

B) 5 mm

 C) 25cm

* 1. 6 cm
	2. .1 4m:10m

2.7.2 10m: 4m

2.7.3 2times longer

2.7.4  or 

2.8.1 6 cm

2.8.2 4 cm

2.8.3 24 blocks

2.9.1 6 cm

* + 1. 4cm

2.9.3 24 cm2

2.10 .c. 3 350m

**3. CAPACITY:**

3.1 a) 16 cups

 b) 6 cups

3.2

1. 3.2 5 = 3 250 m
2.  = 250 m
3. 3,750  = 3 750 m

3.3 a) 6 620 litres

 b) 738 litres

 c) 321 litres

 d) 1 059

3.4 b. 8 glasses

3.5 1 800 ml

3.6 9 litres

3.7 375 ml

3.8 1 250 ml

3.9 12 bottles

3.10 a) 1.7 litres

**4. TEMPERATURE:**

4.1 a) 8º

 b) 10 ºC

 c) B 37ºC

**

4.2 a) the last thermometer or number 4

 b) the third thermometer or number 3

* 1. 80 C
1. **TIME**

5.1 2h00 / 14h00

5.2 Eight minutes past ten and 10h08

5.3

5.4 eleven minutes to one

5.5 19:00

 9:45 am

 Twenty past two in the afternoon

 Quarter past ten in the evening

 24:00

5.6 12 hours 30 min

5.7 1 hour 40 min

5.8 7h 30

5.9 5 hours 30 min

5.10.1 5 hours 40 min

5.10.2 20 hours

5.11

1. 5 minutes = 300 seconds
2. 17 hours = 1 020 minutes
3. 4 hours = 14 400 seconds
4. 1 week = 10 080 minutes
5. 2150 years = 215decades

5.12 8 hours 15 minutes

5.13 1 890 minutes = 31 hrs 30 minutes

**CONTENT AREA: DATA HANDLING**

1. **Tallies**
	1. red – 8 cars

white – 12 cars

yellow –

1.2.1 16 lions

1.2.2

1.3.1 Choc-o-mints – 13

1.3.2

2.1 **Customers choice of Vehicle**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  **Number of customers** |  |  |  |  |  |  |  |  |  |  |
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| **Motor Cycle** | **Car** | **Minibus** | **Bakkie** | **Heavy Vehicle** |

2.2

|  |  |
| --- | --- |
| Number | Total |
| 1 | 15 |
| 2 | 11 |
| 3 | 11 |
| 4 | 7 |
| 5 | 3 |
| 6 | 2 |

2.3

3.1.1 ***mode – 7***

***3.1.2 median – 6***

3.2.1 4 learners

3.2.2 12

3.3. mean – 27%

3.4 median – 76,5

3.5 R4,40

4.1.1 bar graph

4.1.2 days of the week

4.1.3 Wednesday

4.1.4 100 litres

4.1.5 more people are shopping during the weekend

4.1.6 Monday and Thursday

4.1.7 35 litres

4.1.8 15 litres

5.1 60 litres

5.2 dishes

6.1 90 litres

6.2 60 litres

7.1 of learners

7.2 

