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**MATHEMATICS LESSON PLAN GRADE 7**

**TERM 2: April - June**

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| **DURATION**: | **1 Hour** |

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| 1. **TOPIC: COMMON FRACTIONS: Ordering, comparing and simplifying  fractions (Lesson 1)**
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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**

**By the end of the lesson learners should be able to:** * **Compare and order common fractions, including specifically tenths and hundredths and extends to thousandths.**
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| 1. **RESOURCES:**
 | Textbooks, DBE Workbook 1 |
| 1. **PRIOR KNOWLEDGE:**
 | * Comparing common fractions
* Equivalent fractions
 |
| **6. INTRODUCTION** (Suggested time: 10 Minutes) |
| 1. Complete the following by making the fractions equal.
2. =
3. =
4. =
5. Complete the pattern.
6. ;;;\_\_ ;\_\_;\_\_
7. ;;;\_\_;\_\_;\_\_
8. ;;;\_\_;\_\_;\_\_
 |
| **7.LESSON PRESENTATION/DEVELOPMENT**(Suggested time: 20 minutes) |
| **Teaching activities** | **Learning activities****(Learners are expected to:)** |
| Divide learners into groups and present activities based on multiplication of whole numbers**Example 1** Replace the \* with < or > or = to make the statement true 1. \*  =  <
2. \*  =  >
3. \*  =  <

 **Example 2** Write these fractions in an ascending order1. ;  ;  ; = ; ;; = ;;;

 1. ;  ; ;  ; = ;;;;  =;;;;

**ACTIVITY (Small groups)**1. Replace the \* with < or > or =

 1. \*
2. \*
3. \*
4. Rewrite the following fractions so that they all have the same denominator and then arrange the fractions in an ascending order.
5. ; ; ;;

b)  ;  ;  ;  ; 1. ;;;;
 | * discuss in groups and give feedback
* share their solutions with the whole class.
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| **8. CLASSWORK**(Suggested time: 15 minutes) |
| * DBE Workbook1: page 74 , No. 1 (a) – (c) and page 75 No. 3 (a – e)
 |
| **9. CONSOLIDATION/CONCLUSION& HOMEWORK**(Suggested time: 5 minutes) |
| 1. **Emphasise that:**
* Ordering means arranging in ascending or descending order and comparing two or more fractions means to determine which one is bigger or smaller.
1. The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore, Homework should be purposeful and the principle of ‘Less is more’ is recommended, i.e. give learners few high-quality activities that address variety of skills than many activities that do not enhance learners’ conceptual understanding.

Carefully select appropriate activities from the Sasol-Inzalo Books, DBE workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.* **Homework** DBE Workbook 1: page 74, No. 1 (d) – (f); No 2 (a) – (e)
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| **DURATION**: | **1 Hour** |

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| 1. **TOPIC: COMMON FRACTIONS: Calculations using fractions (Lesson 2)**
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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**

**By the end of the lesson learners should be able to:*** extend addition and subtraction to fractions where one denominator is not a multiple of the other.

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| 1. **RESOURCES:**
 | Textbooks, DBE Workbook 1, Sasol-Inzalo Book 1 |
| 1. **PRIOR KNOWLEDGE:**
 | * Addition and subtraction of whole numbers
* Conversion of mixed numbers
* LCD
 |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes)
 |
| Homework provides an opportunity for teachers to track learners’ progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore, it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions.  |
| **6. INTRODUCTION** (Suggested time: 10 Minutes) |
| **Activity**Simplify the following:1. +
2. -
3. +
4. -
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| **7.LESSON PRESENTATION/DEVELOPMENT**(Suggested time: 20 minutes) |
| **Teaching activities** | **Learning activities****(Learners are expected to:)** |
| **Worked examples****Divide learners into small groups**Simplify the following:**Example 1**+  = + =**Example 2** +  =  +  =  + ==**Example 3**  -  =  -  =  -  = =**ACTIVITY (Small groups)** Calculate the following:1. +  +
2. -
3. -
4. +  -
 | * discuss in their groups and give feedback
* share their solutions with the whole class.
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| **8. CLASSWORK**(Suggested time: 15 minutes) |
| * DBE Workbook 1: page 81 No. 2 (a) – (f)
 |
| **9. CONSOLIDATION/CONCLUSION& HOMEWORK**(Suggested time: 5 minutes) |
| 1. **Emphasise that:**
* When adding and subtracting of common fractions with mixed numbers, learners must be able to convert mixed numbers to improper fractions.
* LCM (Lowest common multiple) is very important when adding and subtracting common fractions.
1. The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore, Homework should be purposeful and the principle of ‘Less is more’ is recommended, i.e. give learners few high-quality activities that address variety of skills than many activities that do not enhance learners’ conceptual understanding.

Carefully select appropriate activities from the Sasol-Inzalo Books, DBE workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.**Homework*** Sasol-Inzalo book 1: page 163 no. 4 (c) - (h).
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**TERM 2: April - June**

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| **DURATION**: | **1 Hour** |

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| 1. **TOPIC: COMMON FRACTIONS: Multiplication of common fractions (Lesson 3)**
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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**

**By the end of the lesson learners should be able to:*** Find the fraction of a whole numbers
* Multiply common fractions, including mixed numbers, not limited  to fractions where one denominator is a multiple of another.
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| 1. **RESOURCES:**
 | Textbooks, DBE Workbook 1 |
| 1. **PRIOR KNOWLEDGE:**
 | * Multiplication of whole numbers
* Converting mixed numbers to improper fractions
* Finding fractions of whole numbers
 |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes)
 |
| Homework provides an opportunity for teachers to track learners’ progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore, it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions.  |
| **6. INTRODUCTION** (Suggested time: 10 Minutes) |
| **Activity**Multiply the following fractions.1. 4 ×
2. × 5
3. 7 ×
 |
| **7.LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) |
| **Teaching activities** | **Learning activities****(Learners are expected to:)** |
| **Activity 1****Worked examples**Find the product of the following:1. ×  =

 =  1. 8 ×  =  ×  =  = 2
2. ×  =  ×

 =  = = **ACTIVITY 2 (Small groups)**Multiply the following fractions1. ×
2. × 3
3. of
4. ×
5. ×  ×
 | * discuss in their groups and give feedback
* share their solutions with the whole class.
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| **8. CLASSWORK**(Suggested time: 15 minutes) |
| * DBE Workbook1: page 84, No. 1 (a) – (f ) and page 85, No. 2 (a) – (f)
 |
| **9. CONSOLIDATION/CONCLUSION& HOMEWORK**(Suggested time: 5 minutes) |
| 1. **Emphasise that:**
* When simplifying fractions, the common fractions must remain equivalent.
1. The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore, Homework should be purposeful and the principle of ‘Less is more’ is recommended, i.e. give learners few high-quality activities that address variety of skills than many activities that do not enhance learners’ conceptual understanding.

Carefully select appropriate activities from the Sasol-Inzalo Books, DBE workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.**Homework*** DBE Workbook 1: page 86, No. 1 (a) – (f); page 87 No. 2 (a) – (f)
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**TERM 2: April - June**

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| DURATION: | 1 Hour |

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| 1. **TOPIC: COMMON FRACTIONS**: Solving problems **(Lesson 4)**
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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**

**By the end of the lesson, learners should be able to :*** Solve problems in context involving common fractions and mixed numbers, including grouping, sharing, and finding fractions of whole numbers.
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| 1. **RESOURCES:**
 | DBE workbook 1, Sasol-Inzalo book 1, Textbooks |
| 1. **PRIOR KNOWLEDGE:**
 | * addition, subtraction and multiplication of common fractions
* multiplication table up to at least 12 × 12
 |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes)

Homework provides an opportunity for teachers to track learners’ progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore, it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions. |

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| 1. **INTRODUCTION**(Suggested time: 10 Minutes)

**Activity**1. Calculate: ( + ) - ( + )
2. Calculate:  of 50
3. 200 cars were parked at a stadium parking lot.  of the cars left the parking lot after the game.

How many cars were left after the game? |

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| 1. **LESSON PRESENTATION/DEVELOPMENT**(Suggested time: 20 minutes)
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| **Teaching activities** | **Learning activities** (Learners are expected to:) |
| **ACTIVITY 1 (Pairs)**1. There are 600 learners in a school andof them are in grade 7.  How many learners are in grade 7?

b) Jabu rode  km on his bike on Monday, km on  Wednesday and  on Friday. (i) How many km has he covered all together?(ii) If he needs to complete 15 km in the week, how many  more does he need to ride? | * Calculate solutions as pairs and present to the class
 |
| c) Eddie bought a pair of jeans worth R950 discounted by  . How much did Eddie pay for a pair of jeans?**ACTIVITY 2 (Individually)**1. Calculate  of R230.
2. Sasol-Inzalo book 1. Page 165, No. 6 and 7.
 | * Work out the solution
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| DURATION: | 1 Hour |

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| 1. **TOPIC: COMMON FRACTIONS: Equivalent forms. (Lesson 5)**
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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**

**By the end of the lesson learners should know and be able to:*** Recognize and use equivalent forms of common fractions with 1-digit or 2-digit denominators.
* Recognize equivalence between common fraction and decimal fraction forms of the same number
* Recognize equivalence between common fraction, decimal fraction and percentage forms of the same number
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| 1. **RESOURCES:**
 | Sasol-Inzalo book 1, DBE Workbook 1, texbooks |
| 1. **PRIOR KNOWLEDGE**
 | * Common Fractions
* Decimal Fractions
* Percentages
 |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes)

Homework provides an opportunity for teachers to track learners’ progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore, it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions.  |
| 1. **INTRODUCTION** (Suggested time: 10 Minutes)

Divide learners into small groups.**ACTIVITY** Convert the following to percentages: Convert the following to percentages to common fractions:1. 80%
2. 45%
3. 12,5%
 |
| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes)
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| **Teaching activities** | **Learning activities** (Learners are expected to:) |
| **Worked Examples**Write the simple forms of 25% and 50%.Answers: 25% **or**  **or** 0,25 or  50% **or**  **or** 0,5 **or**   | * Work in small groups to calculate the answers and present to the class
 |
| **ACTIVITY 1** Write the equivalent forms of the fractions.1.

 c) \_\_\_\_ =**ACTIVITY 2**Complete the following table.

|  |  |  |
| --- | --- | --- |
| **Common fraction** | **Decimal fraction** | **Percentage** |
|  |  0,33 |  |
|  |  0,66 |  |
|  |  |  60% |
|  |  |  |
|  |  0,8 |  |

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| 1. **CLASSWORK** (Suggested time: 15 minutes)
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| **Question 1**Write the next or previous equivalent fraction for: |
| **Question 2**Copy and complete the below table. The first one has been done for you.

|  |  |  |  |
| --- | --- | --- | --- |
|  **Fraction** | **Equivalent Fraction** | **Decimal** | **Percentage** |
|  |  |  0,2 | 20% |
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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK**(Suggested time: 5 minutes)
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| 1. **Emphasise that:**
* Equivalent fractions are fractions which have the same value, even though they may look different.
1. The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore, Homework should be purposeful and the principle of ‘Less is more’ is recommended, i.e. give learners few high-quality activities that address variety of skills than many activities that do not enhance learners’ conceptual understanding.

Carefully select appropriate activities from the Sasol-Inzalo Books,DBE workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.**Homework:*** DBE Workbook 1: Page 94, No. 2.
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**TERM 2: April - June**

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| DURATION: | 1 Hour |

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| 1. **TOPIC: AREA AND PERIMETER OF 2D SHAPES:** Area and Perimeter **(Lesson 6)**
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| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**

**By the end of the lesson learners should know and be able to** calculate the perimeter of regular and irregular polygons |

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| 1. **RESOURCES:**
 | DBE workbook 1, Sasol-Inzalo Book 1, textbooks |
| 1. **PRIOR KNOWLEDGE:**
 | * Perimeter of polygons
* addition of whole numbers and decimals
 |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes)

Homework provides an opportunity for teachers to track learners’ progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore, it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions. |
| 1. **INTRODUCTION** (Suggested time: 10 Minutes)

 **Activity** : Revise with learners the following work done in Grade 6 by asking them to:* define:
* Perimeter of a polygon: The sum of lengths of its sides or the distance along the sides of a shape.
* Define and give examples of the following polygons:
* Regular polygon: A polygon with all angles equal (equiangular) and all sides equal (equilateral).

 * Irregular polygon: A polygon that does not have all sides and all angles equal.

 **NOTE**: * At this stage learners should apply the definition of a perimeter to determine the perimeter of

 both regular and irregular polygons.* Small lines on the sides of polygons indicate equality.
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| 1. **LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes)
 |
| **Teaching activities** | **Learning activities** (Learners are expected to:) |
| Present the following examples to learners by applying the definition of a perimeter to determine the perimeter of a polygon:Example 1: Calculate the perimeter of polygons:   Perimeter    Perimeter  Example 2: Determine the perimeter of the figure below:   Perimeter Perimeter **NOTE**: At this stage learners should apply the definition of a  perimeter to determine the perimeter of both regular and  irregular polygons. | be actively engaged during the lesson presentation by answering questions.Do example 2 as an activity in their groups and discuss their solution with the whole class. |

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| 1. **CLASSWORK** (Suggested time: 15 minutes)

Sasol-Inzalo Book 1: page 213 no. 1 (Do shape D, E and F) |

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| 1. **CONSOLIDATION/CONCLUSION & HOMEWORK (Suggested time: 5 minutes)**
 |
| 1. **Emphasise that**:
* Perimeter of a polygon is the sum of lengths of its sides or the distance along the sides of a shape.
* Regular polygons are polygons with all angles equal (equiangular) and all sides equal (equilateral)
* Irregular polygons are polygons that do not have all angles and all sides equal.
1. The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore, Homework should be purposeful and the principle of ‘Less is more’ is recommended, i.e. give learners few high-quality activities that address variety of skills than many activities that do not enhance learners’ conceptual understanding.

Carefully select appropriate activities from the Sasol-Inzalo Book 1, DBE workbook 1 and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.**Homework:** Sasol-Inzalo Book 1 page 213 no. 1 (Figure B and C) DBE workbook 1 page 118 no. 1 (a) and (c) |



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**TERM 2: April - June**

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| DURATION: | 1 Hour |

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| 1. **TOPIC: COMMON FRACTIONS: Calculations using fractions (Lesson 7)**
 |
| 1. **CONCEPTS & SKILLS TO BE ACHIEVED:**

**By the end of the lesson learners should be able to:*** Add and subtract common fractions, including mixed numbers, limited to fractions with the same denominator or where one denominator is a multiple of another.

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| 1. **RESOURCES:**
 | Textbooks, DBE Workbook 1, Sasol-Inzalo book 1 |
| 1. **PRIOR KNOWLEDGE:**
 | * Addition and subtraction of whole numbers
* Conversion of mixed numbers
* LCD
 |
| 1. **REVIEW AND CORRECTION OF HOMEWORK** (suggested time: 10 minutes)
 |
| Homework provides an opportunity for teachers to track learners’ progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore, it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions.  |
| **6. INTRODUCTION** (Suggested time: 10 Minutes) |
| **Activity**Add the following fractions1. +
2. +
3. -
 |

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| **7.LESSON PRESENTATION/DEVELOPMENT** (Suggested time: 20 minutes) |
| **Teaching activities** | **Learning activities****(Learners are expected to:)** |
| Examples of how to add or subtract fractions**Example 1 (Start from what learners learnt in grade 6)** +  =  +  **OR** 2 + 1 + ( + ) == 3 () =  = **Example 2** +  =  +  =  + ==**Example 3**  -  =  -  =  -  = = =**ACTIVITY (Small groups)** Calculate the following:1. +  +
2. +  +
3. -
4. -
5. +  -
 | * discuss in their groups and give feedback
* share their solutions with the whole class.
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| **8. CLASSWORK**(Suggested time: 15 minutes) |
| * Sasol-Inzalo book 1: page 163 no. 4 (a), (b), (f) and (g).
 |
| **9. CONSOLIDATION/CONCLUSION& HOMEWORK** (Suggested time: 5 minutes) |
| 1. **Emphasise that:**
* When adding and subtracting of common fractions with mixed numbers; learners must able to convert mixed numbers to proper and/or improper fractions.
* LCM (Lowest common multiple) is very important when adding and subtracting common fractions.
1. The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore, Homework should be purposeful and the principle of ‘Less is more’ is recommended, i.e. give learners few high-quality activities that address variety of skills than many activities that do not enhance learners’ conceptual understanding.

Carefully select appropriate activities from the Sasol-Inzalo Books, DBE workbooks and/or textbooks for learners’ homework. The selected activities should address different cognitive levels.**Homework*** Sasol-Inzalo book 1: page 163, No. 1 (c) , (d) , (e) and (h)
 |