Plan of Work **Mathematics**

**Grade 7**

For examination in 2025

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# **Introduction**

**Prescribedtextbooks:**

* Mathematics Grade 7 [Code: MIE7]
* Worked Examples Maths – Form One (Edi. 2015 or 2016) [Code: WEM1]
* Specimen Papers for Grade 7

## **Recommended prior knowledge**

Learners beginning this course are expected to have knowledge of the following topics:

|  | **Topic** |
| --- | --- |
| 1 | Numbers |
| 2 | Geometry |
| 3 | Measure |
| 4 | Graphs |

## **Websites and videos**

This plan of work includes website links providing direct access to internet resources. Modern College is not responsible for the accuracy or content of information contained in these sites. The inclusion of a link to an external website should not be understood to be an endorsement of that website or the site's owners (or their products/services).

The website pages referenced in this plan of work were selected when the plan of work was produced. Other aspects of the sites were not checked and only the particular resources are recommended.

# **FIRST TERM [10/01/202**5 **–** 11**/04/202**5**]**

**Topic: 1.1 Numbers,Factors and Multiples**

| **Learning Objectives** |  | **Worked Examples** | **Classwork Homework** |  | **&** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Understand different type of numbers; |  | **[Book MIE7]:** To study notes (pg 1 – 2)**.** | **[Book MIE7]:**  1.1 nos 1, 2. | pg | 2 ex | **[Book MW1]:** pg 2 no 1 | Classification of the different types of numbers [(https://www.youtube.com/ watch?v=9orS7coe2WI](https://www.youtube.com/watch?v=9orS7coe2WI)) |
| *b) use prime numbers, prime factors multiples;* | *and* | **[Book MIE7]:** To study notes & 3 worked examples (pg 3 – 5)**.**  **[WEM1]:** Unit 1; To study worked examples nos 3, 7(a), 9, 10. | **[Book MIE7]:** pg 4 ex 1.2 nos 1 – 3 ;  pg 5 – 6 ex 1.3 nos 1 –  3. | | | **[Book MIE7]:** pg 4 ex 1.2 nos 4 – 6.  **[Book MW1]:** pg 2 nos  2, 4 | Prime numbers and  Composite numbers [(https://www.youtube.com/ watch?v=jpMYfW9XziU](https://www.youtube.com/watch?v=jpMYfW9XziU)) |
| *c) determine the HCF and LCM.* |  | **[Book MIE7]:** To study notes & 11 worked examples (pg 6 – 12)**.**  **[WEM1]:** Unit 1; To study worked examples nos 1, 2, 4-8, 11-15. | **[Book MIE7]:** pg 7 ex 1.4 nos 1 – 4 ; pg 8 ex 1.5 nos 1 – 4 ; pg 10 ex 1.6 nos 1, 2 ; pg 12 ex 1.7 nos 1 – 3. | | | **[Book MIE7]:** pg 8 ex 1.5 nos 5 – 6 ;pg 12 ex 1.7 nos 4 – 5.  **[Book MW1]:** pg 3 nos  3, 5-10 | Prime factorisation method for finding the HCF  [(https://www.youtube.com/ watch?v=k85IhfyP-po](https://www.youtube.com/watch?v=k85IhfyP-po)) Prime factorisation method for finding the LCM  [(https://www.youtube.com/ watch?v=fwOQPaqUcpg](https://www.youtube.com/watch?v=fwOQPaqUcpg)) |

**Topic: 1.2Integers**

| **Learning Objectives** | **Worked Examples** | **Classwork &**  **Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Distinguish between positive and negative integers; | **[Book MIE7]:** To study notes & 3 worked examples (pg 14 – 15). | **[Book MIE7]:**pg 15 Ex  2.1 nos 1 – 3 |  | Understanding Integers  ([https://www.youtube.co m/watch?v=5oHJcmYbHv](https://www.youtube.com/watch?v=5oHJcmYbHvA)  [A](https://www.youtube.com/watch?v=5oHJcmYbHvA)) |
| b) Represent positive and negative integers on a number line; | **[Book MIE7]:** To study notes & 2 worked examples (pg 16 – 17).  **[WEM1]:** Unit 2; To study worked examples nos 1-4. | **[Book MIE7]:**pg 17 Ex  2.2 nos 1, 2; | **[Book MW1]:** pg 7  nos 1, 2 |  |
| c) Compare and order integers; | **[Book MIE7]:** To study notes & 1 worked example (pg  14).  **[WEM1]:** Unit 2; To study worked examples no 5. | **[Book MIE7]:**pg 18 –  19 Ex 2.3 nos 1 - 5; | **[Book MW1]:** pg 7-8 nos 3, 4 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| d) Perform arithmetic operations on integers; | **[Book MIE7]:** To study notes & 7 worked examples (pg 19 – 26).  **[WEM1]:** Unit 2; To study worked examples nos 6, 8, 11, 12, 14, 15. | **[Book MIE7]:**pg 20 Ex 2.4; pg 21 Ex 2.5 nos 1 – 5; **]:**pg 22 – 23 Ex 2.6 nos 1 – 3; pg 25  Ex 2.7 nos 1 – 5; pg  26 Ex 2.8 | **[Book MIE7]:**pg 22 – 23 Ex 2.6 nos 4 – 6; pg 25 Ex 2.7 nos 6 – 7  **[Book MW1]:** pg 8-9  nos 5-7 | ●  ● | Adding and  Subtracting Integers ([https://www.youtub](https://www.youtube.com/watch?v=_BgblvF90UE)  [e.com/watch?v=\_Bgb lvF90UE](https://www.youtube.com/watch?v=_BgblvF90UE))  Multiplication and  Division of Integers ([https://www.youtub e.com/watch?v=K\_tP bVPfHgk](https://www.youtube.com/watch?v=K_tPbVPfHgk)) |
| e) Find the square root of square numbers; | **[Book MIE7]:** To study notes & 2 worked examples (pg 26 – 27). | **[Book MIE7]:**pg 27 Ex 2.9 nos 1 – 3. | **[Book MW1]:** pg 10 no 8 |  |  |
| f) Perform arithmetic operations mentally. | **[Book MIE7]:** To study notes & 10 worked examples (pg 28 – 31). |  | **[Book MIE7]:**pg 29 Ex 2.10 nos 1 – 2; pg 30 Ex 2.11; pg 31 Ex 2.12  **[Book MW1]:** pg 10  nos 9, 10 |  |  |

**Topic: 1.3Order of Operations**

| **Learning Objectives** |  | **Worked Examples** | **Classwork &**  **Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Perform operations according to  BODMAS convention; | the | **[Book MIE7]:** To study notes & 3 worked examples (pg 32– 35)**.**  **[WEM1]:** Unit 2; To study worked examples nos 7, 9, 10, 13. | **[Book MIE7]:** pg 36  Ex 3.1 nos 1 – 3 | **[Book MIE7]:** pg 36 – 37 Ex 3.1 nos 4 – 8  **[Book MW1]:** pg  12-14 nos 1-7 | Understanding Order of  Operations  ([https://www.youtube.co](https://www.youtube.com/watch?v=dAgfnK528RA)  [m/watch?v=dAgfnK528RA](https://www.youtube.com/watch?v=dAgfnK528RA)  ) |
| b) Use the commutative, associative distributive properties of operations. | and | **[Book MIE7]:** To study notes (pg 38–  39)**.** | **[Book MIE7]:**pg 38 Ex  3.2 ; pg 38 Ex 3.3 no 1 | **[Book MIE7]:** pg 39 Ex 3.3 no 2. | ● |

**Mid First Term Assessment**

| **Component** | **Time Allocation** | **Type** |  | **Maximum Mark** |
| --- | --- | --- | --- | --- |
|  | 1 hour | Short questions  structured questions | and | 50 |

The Paper will consist of short and structured questions. Neither mathematical tables nor slide rules nor calculators will be allowed in this paper. Omission of essential working will result in loss of marks. Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus for Grade 7 first term covered till the assessment, the Syllabus for Grades 1 to 6 for exams in 2019 and questions will not necessarily be restricted to a single topic.

**Topic: 1.4Fractions and Decimals**

| **Learning Objectives** | | **Worked Examples** | **Classwork &**  **Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- | --- |
| ***Students***  a) | ***should be able to:***  Demonstrate an understanding of the concept of fractions as part of a whole, as measure, as an operator, as a quotient and as a ratio. | **[Book MIE7]:** To study notes (pg 40 – 41) | **[Book MIE7] :** pg 41 –  42 Ex 4.1 nos 1 – 6 |  | Understanding Fractions  [(https://www.youtube.com](https://www.youtube.com/watch?v=n0FZhQ_GkKw)  [/watch?v=n0FZhQ\_GkKw](https://www.youtube.com/watch?v=n0FZhQ_GkKw)) |
| b)  . | identify the types of fractions (proper, improper and mixed; | **[Book MIE7]:** To study notes & 4 worked examples (pg 41 - 45) | **[Book MIE7] :** pg  41-42 Ex 4.1 no 7; pg  43 Ex 4.2 nos 1(a-d), 2(a-d) ; pg 45 Ex 4.3 nos  1(a-d,j),2(a-d,j),3(a-d,i)  ,4(a),5(a, f),6(a,e) | **[Book MIE7] :** pg 43 Ex 4.2 ; pg 45 Ex 4.3  **[Book MW1]:** pg  16-17 nos 1-4 |  |
| c) | compare and order fractions | **[Book MIE7]:** To study notes & 2 worked examples (pg 46 –  47).. | **[Book MIE7] :**; pg 47  Ex 4.4 nos 1(a,c),  2(a,c), 3(a,c,f), 4(a,d) | **[Book MIE7] :**; pg 47  Ex 4.4  **[Book MW1]:** pg 17 no 5 | How to compare fractions [(https://www.youtube.com](https://www.youtube.com/watch?v=KNdUJQ_qd4U)  [/watch?v=KNdUJQ\_qd4U](https://www.youtube.com/watch?v=KNdUJQ_qd4U)) |
| d) add, subtract, multiply and divide fractions | | **[Book MIE7] :**To study notes & 7 worked examples (pg 47 –  53)..  **[WEM1]:** Unit 3; To study worked examples nos 1-3, 5, 6, 9, 12. | **[Book MIE7] :** pg 48 Ex 4.5 nos 1, 2(a,b,g,h); pg 50 Ex 4.6 ; pg 52 Ex  4.7 nos  1(a,b,h,i),2(a,b,c,e),3(a  ,b,f),4; pg 53 Ex 4.8 nos 1 | **[Book MIE7] :** pg 48 Ex 4.5 ; pg 52 Ex 4.7 ; pg 53 Ex 4.8 nos 2  **[Book MW1]:** pg  18-19 no 6- | * Adding and Subtracting   Fractions  [(https://www.youtube.c](https://www.youtube.com/watch?v=5juto2ze8Lg)  [om/watch?v=5juto2ze8 Lg](https://www.youtube.com/watch?v=5juto2ze8Lg))   * Multiplying and Dividing Fractions   [(https://www.youtube.c](https://www.youtube.com/watch?v=xB8VYrsuu34) |

|  |  |  |  |  | [om/watch?v=xB8VYrsuu 34](https://www.youtube.com/watch?v=xB8VYrsuu34)) |
| --- | --- | --- | --- | --- | --- |
| e) | solve word problems involving fractions | **[Book MIE7] :**To study  1 worked example (pg  54)..  **[WEM1]:** Unit 3; To study worked examples nos 11, 13-15. | **[Book MIE7] :** pg 54 Ex  4.9 nos 1 – 5 | **[Book MIE7] :** pg 54 Ex 4.9 nos 6 – 8  **[Book MW1]:** pg  19-20 nos 7-9 |  |
| f) | demonstrate conceptual understanding of decimals including place value | **[Book MIE7] :**To study notes (pg 55 – 56).. | **[Book MIE7] :** pg 56 Ex  4.10 nos 1 – 3 |  | Fractions, decimals and place value  [(https://www.youtube.com](https://www.youtube.com/watch?v=Mst8iZjIpFE)  [/watch?v=Mst8iZjIpFE](https://www.youtube.com/watch?v=Mst8iZjIpFE)) |
| g) | convert fractions to decimals and vice versa | **[Book MIE7] :**To study notes & 4 worked examples (pg 56 –  58)..  **[WEM1]:** Unit 3; To study worked examples nos 7, 8, 10. | **[Book MIE7] :** pg 58 Ex  4.11 nos  1,2(a,b,h,j),3(a,b,e),  4(a,b,h,i,j) | **[Book MIE7]:** pg 58 Ex  4.11  **[Book MW1]:** pg 21  nos 10, 11 |  |
| h) | compare and order decimals | **[Book MIE7] :**To study  1 worked example (pg  59).. | **[Book MIE7] :** pg 59 Ex  4.12 nos  1(a,d),2(a,d),3, 4 | **[Book MIE7] :** pg 59 Ex 4.12  **[Book MW1]:** pg 22 no 12 |  |

|  |  |  |  |  | |  |
| --- | --- | --- | --- | --- | --- | --- |
| i) | add, subtract, multiply and divide decimals | **[Book MIE7] :**To study notes & 7 worked examples (pg 60 –  63).. | **[Book MIE7] :** pg 60 Ex  4.13 nos 1 – 3; pg 62  Ex 4.14 nos  1(a,b,c),2(a,b,h),  3(a,b,h); pg 63 Ex 4.15 nos  1(a,b,h),2(a,b,f),3(a,b,f  ), 4(a,b,f) | **[Book MIE7] :** pg 62  4.14 ; pg 63 Ex 4.15  **[Book MW1]:** pg no 13 | Ex  22 | Decimal Arithmetic  [(https://www.youtube.com](https://www.youtube.com/watch?v=kwh4SD1ToFc)  [/watch?v=kwh4SD1ToFc](https://www.youtube.com/watch?v=kwh4SD1ToFc)) |
| j) | solve word problems involving decimals | **[Book MIE7] :**To study 1 worked example (pg 63 – 64).. | **[Book MIE7] :** pg 64 Ex  4.16 nos 1 – 5 | **[Book MW1]:** pg  nos 14-16 | 23 |  |

**Topic: 1.5Angles**

| **Learning Objectives** | **Worked Examples** | **Classwork &**  **Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Recognise and use fundamental geometrical terms; | **[Book MIE7]:** To study notes (pg 66 –  67).  **[Book MT1]:** To study notes & 2 worked examples (pg 65 –  68). | **[Book MIE7]:**pg 67 Ex  5.1 |  |  |
| b) distinguish between different types of angles; | **[Book MIE7]:** To study notes (pg 67 –  68).  **[Book MT1]:** To study notes & 2 worked examples (pg 65 –  68). | **[Book MIE7]:**pg 68 Ex  5.2 | **[Book MW1]:** pg 25 nos 1, 2 |  |
| c) identify parallel lines and transversal | **[Book MIE7]:** To study notes (pg 69).  **[Book MT1]:** To study notes & 2 worked examples (pg 65 –  68). | **[Book MIE7]:**pg 69 Ex  5.3 |  | Parallel lines and transversal  ([https://www.youtube.co m/watch?v=6RMN5Pf1fH](https://www.youtube.com/watch?v=6RMN5Pf1fHU)  [U](https://www.youtube.com/watch?v=6RMN5Pf1fHU)) |

| d) ; measure and construct angles using geometrical instrument; | **[Book MIE7]:** To study notes & 3 worked examples (pg 70 – 72).  **[Book MT1]:** To study notes & 2 worked examples (pg 65 –  68). | **[Book MIE7]:**pg 71 Ex  5.4; pg 73 Ex 5.5 nos  1,2(a,b,e,l),3(a,c,d,e),  4(a,f),5,6 | **[Book MIE7]:**pg 73 Ex  5.5 | How to measure angles ([https://www.youtube.co](https://www.youtube.com/watch?v=Gzd_lsNwTOI)  [m/watch?v=Gzd\_lsNwTOI](https://www.youtube.com/watch?v=Gzd_lsNwTOI)  ) |
| --- | --- | --- | --- | --- |
| e) identify complementary, supplementary, vertically opposite, corresponding, alternate and co- interior angles; | **[Book MIE7]:** To study notes (pg 74, 76, 77, 78).  **[WEM1]:** Unit 6; To study worked examples nos 1-15. **[Book MT1]:** To study notes & 2 worked examples (pg 65 –  68). |  |  |  |
| f) find unknown angles using notions of complementary,supplementary, corresponding, alternate and co-interior angles. | **[Book MIE7]:** To study notes &5 worked examples (pg 74 – 79).  **[Book MT1]:** To study notes & 2 worked examples (pg 65 –  68). | **[Book MIE7]:**pg 74 Ex  5.6 nos  1(a,f),2(a,f),3-8 ; pg  76 Ex 5.7; pg 79 Ex  5.8 nos  1-3,4(a,d,f,h,i),5-9, 10(a,d,i). | **[Book MIE7]:**pg 74 Ex 5.6 nos 1,2; pg 79 Ex  5.8 nos 4,10.  **[Book MW1]:** pg  25-28 nos 3-6 |  |

**Topic: 1.6Polygons**

| **Learning Objectives** | **Worked Examples** | **Classwork &**  **Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Identify and name polygons including regular polygons | **[Book MIE7]:** To study notes (pg 84 –  86). | **[Book MIE7]:**pg 86 Ex  6.1 | **[Book MW1]:** pg 30 no 1 | Understanding polygons ([https://www.youtube.co m/watch?v=IaoZhhx\_I9s](https://www.youtube.com/watch?v=IaoZhhx_I9s)) |
| b) Differentiate among scalene, isosceles and equilateral triangles in terms of lengths and angles; | **[Book MIE7]:** To study notes & 10 worked examples (pg 86 – 88). | **[Book MIE7]:**pg 88 Ex  6.3 |  | Understanding triangles  ([https://www.youtube.co](https://www.youtube.com/watch?v=mLeNaZcy-hE)  [m/watch?v=mLeNaZcy-hE](https://www.youtube.com/watch?v=mLeNaZcy-hE)  ) |
| c) Find unknown angles in triangles | **[Book MIE7]:** To study notes & 2 worked examples (pg 86 – 89). | **[Book MIE7]:**pg 87 Ex  6.2 no 1(i,vi); pg 89  Ex 6.4 nos 1, 2(i,-iii) | **[Book MIE7]:**pg 87 Ex  6.2; pg 89 Ex 6.4;  **[Book MW1]:** pg  30-31 no 2 |  |
| d) Differentiate among different types of quadrilaterals(rectangle, square, parallelogram, rhombus, kite, trapezium, arrow head); | **[Book MIE7]:** To study notes (pg 90 –  92). | **[Book MIE7]:**pg 92 Ex  6.5 | **[Book MW1]:** pg 31 no 3 |  |
| e) Find unknown angles in quadrilaterals; | **[Book MIE7]:** To study notes & 7 worked examples (pg 92 – 94). | **[Book MIE7]:**pg 94 Ex  6.6 nos  1(a,b,d,g,i),2,3. | **[Book MIE7]:**pg 94 Ex  6.6.  **[Book MW1]:** pg  32-33 nos 4-7 |  |

**Topic: 1.7Length, Perimeter and Area**

| **Learning Objectives** | **Worked Examples** | **Classwork &**  **Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Distinguish among different units of length and units of area; | **[Book MIE7]:** To study notes (pg 96, 103). | **[Book MIE7]:**pg 97 Ex  7.1; pg 104 Ex 7.7 |  | Understanding area  ([https://www.youtube.co](https://www.youtube.com/watch?v=xCdxURXMdFY)  [m/watch?v=xCdxURXMdF](https://www.youtube.com/watch?v=xCdxURXMdFY)  [Y](https://www.youtube.com/watch?v=xCdxURXMdFY)) |
| ***b)*** convert length and area from one unit to another; | **[Book MIE7]:** To study notes & 3 worked examples (pg 97-98, pg 104-105).  **[WEM1]:** Unit 7; To study worked examples nos 2, 9.  . | **[Book MIE7]:**pg 98 Ex  7.2 nos  1(a,b,c,e,g,h,j,k,l,n),  2(a,i),3(a,h),4(a,f); pg  105 Ex 7.8 | **[Book MIE7]:**pg 98 Ex  7.2  **[Book MW1]:** pg 35 nos 1, 2; pg 39 no 7 |  |
| c) perform arithmetic operations involving length; | **[Book MIE7]:** To study notes & 2 worked examples (pg 98 – 99). | **[Book MIE7]:**pg 99 Ex  7.3 (a,b) | **[Book MIE7]:**pg 99 Ex  7.3(c-f) |  |

| d) find the perimeter and area of 2 – D  figures; | **[Book MIE7]:** To study notes & 7 worked examples (pg 100 – 101, 106-116).  **[WEM1]:** Unit 7; To study worked examples nos 1, 3-8, 10-15. | **[Book MIE7]:**pg 101  Ex 7.5 no 1 (a,b,f); pg  106 Ex 7.9 nos 1-7; pg  109 Ex 7.10; pg 110  Ex 7.11; pg 111 Ex 7.12; pg 112 Ex 7.13; pg 114 Ex 7.14; pg 115 Ex 7.15 nos  1(a),2. | **[Book MIE7]:**pg  101-102 Ex 7.5 no 1,  2; pg 106 Ex 7.9 nos 8-14; pg 115 Ex 7.15 no 1.  **[Book MW1]:** pg 35-37 no 3; pg 41-44 no 11; pg 46-47 no 14 | ●  ● | Area and perimeter  of square and rectangle  ([https://www.youtub](https://www.youtube.com/watch?v=219AtecQ4cc)  [e.com/watch?v=219A tecQ4cc](https://www.youtube.com/watch?v=219AtecQ4cc) Understanding perimeter  ([https://www.youtub](https://www.youtube.com/watch?v=AAY1bsazcgM)  [e.com/watch?v=AAY1 bsazcgM](https://www.youtube.com/watch?v=AAY1bsazcgM)) |
| --- | --- | --- | --- | --- | --- |
| e) solve word problems involving length, perimeter, and area. | **[Book MIE7]:** To study notes & 1 worked examples (pg  99). | **[Book MIE7]:**pg 100  Ex 7.4; pg 102-103 Ex  7.6 | **[Book MW1]:** pg 38 nos 4-6; pg 40-41 nos  8-10; pg 45 nos 12,  13; pg 47 no 15 |  |  |

**March Assessment**

| **Component** | **Time Allocation** | **Type** | **Maximum Mark** |
| --- | --- | --- | --- |
|  | 2 hour | Short answer and structured questions | 100 |

The Question Paper will consist of about 20 short and structured questions. Neither mathematical tables nor slide rules nor calculators will be allowed in this paper. Omission of essential working will result in loss of marks. Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus for Grade 7 first term, the Syllabus for Grades 1 to 6 for exams in 2019 and questions will not necessarily be restricted to a single topic.

# **SECOND TERM [2**8**/04/202**5 **– 1**8**/07/202**5**]**

**Topic: 2.1Percentages**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) recognise the use of percentages in real life situations; | **[Book MIE7] :**To study notes & 1 worked example (pg 117 – 118). |  |  | What are percentages ([https://www.youtube.co m/watch?v=JeVSmq1Nrp w](https://www.youtube.com/watch?v=JeVSmq1Nrpw)) |
| b) convert a percentage to a fraction and / or decimal and vice – versa; | **[Book MIE7] :**To study notes & 4 worked examples (pg  118 – 121). | **[Book MIE7] :**pg 118  Ex 8.1 nos  1(a,h),2(a,h); pg 119  Ex 8.2 (a,g); pg 120 Ex  8.3(a,f); pg 121 Ex  8.4(a,j), Ex 8.5 (a,d,l) | **[Book MIE7] :**pg 118 Ex 8.1; pg 119 Ex 8.2; pg 120 Ex 8.3; pg 121 Ex 8.4, Ex 8.5  **[Book MW1]:** pg  49-50 no 1-4, |  |
| c) solve word related problems involving percentages. | **[Book MIE7] :**To study notes & 2 worked examples (pg 122). | **[Book MIE7] :**pg 122 Ex 8.6 nos 1 – 5. | **[Book MIE7] :** pg 122 Ex 8.6 nos 6 – 8  **[Book MW1]:** pg  51-52 nos 5-10 | How to find the percentage of a number ([https://www.youtube.co m/watch?v=rR95Cbcjzus](https://www.youtube.com/watch?v=rR95Cbcjzus)) |

**2.2Ratio and Proportion**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) demonstrate understanding of ratio and direct proportion; | **[Book MIE7]:** To study notes (pg 124 – 125). |  |  | * What are ratios ([https://www.youtube. com/watch?v=puku5v UCOcE](https://www.youtube.com/watch?v=puku5vUCOcE)) * What are proportions ([https://www.youtube. com/watch?v=USmit5z](https://www.youtube.com/watch?v=USmit5zUGas)   [UGas](https://www.youtube.com/watch?v=USmit5zUGas)) |
| b) compare two quantities multiplicatively in terms of a ratio and proportion; | **[Book MIE7]:** To study notes & 4 worked examples (pg 125 – 126, 129-130). | **[Book MIE7]**: pg 126  – 127 Ex 8.1 no  1,2,3,4(a,l),5,6(a,h),7 | **[Book MIE7]**: pg 126  – 127 Ex 8.1 no  4,6,8,9  **[Book MW1]:** pg 54 no 1 |  |
| c) solve word problems involving ratio and direct proportion. | **[Book MIE7]:** To study notes & 6 worked examples (pg 127 – 128, 129-130). | **[Book MIE7]**: pg 129 Ex 8.2 no 1 – 2; pg  131 Ex 8.3 no 1 – 6. | **[Book MIE7]**: pg 129  Ex 8.2 no 3 – 12; pg 131 Ex 8.3 no 7 – 9.  **[Book MW1]:** pg  55-57 nos 2-11 | Sharing in a given ratio examples  ([https://www.youtube.co m/watch?v=jye-CY7EYfE](https://www.youtube.com/watch?v=jye-CY7EYfE)) |

**2.3Indices**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Identify and use laws of indices involving positive exponents (multiplication law, division law, power law and zero index). | **[Book MIE7]:** To study notes & 6 worked examples (pg 133 – 136). | **[Book MIE7]**: pg 132  Ex 10.1 nos 1 - 2; pg 133 Ex 10.2 nos 1 – 4; pg 135 Ex 10.3 nos 1 4; pg 136 Ex 10.4 nos 1 – 3; pg 137 Ex 10.5 nos 1 – 2. | **[Book MW1]:** pg  59-63 nos 1-5 | * Introduction to indices ([https://www.youtube. com/watch?v=ZJDb7E6 aCrA](https://www.youtube.com/watch?v=ZJDb7E6aCrA)) * Using the laws of indices   ([https://www.youtube. com/watch?v=BUJKED qGp1U](https://www.youtube.com/watch?v=BUJKEDqGp1U)) |

**2.4Money**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) decompose notes and coins; | **[Book MIE7]:** To study notes (pg 138). | **[Book MIE7]:**pg 141  Ex 11.1 nos 1 - 5; pg  145 Ex 11.2 nos 1,2 | **[Book MIE7]:**pg 141  Ex 11.1 nos 6 - 10; pg  145 Ex 11.2 nos 3 – 7 | ● Currency conversions ([https://www.youtube. com/watch?v=WDRhdt](https://www.youtube.com/watch?v=WDRhdtR96E0)  [R96E0](https://www.youtube.com/watch?v=WDRhdtR96E0)) |
| b) convert rupees into cents and vice versa; |  |  |  |  |
| c) recognise the different currencies ($, £, €); | **[Book MIE7]:** To study notes & 1 worked example (pg 143). |  |  |  |
| d) convert from one currrency to another (Rs, $, £, €); | **[Book MIE7]:** To study notes & 1 worked example (pg 143 – 144). | **[Book MIE7]:**pg 145  Ex 11.2 nos 1,2 | **[Book MIE7]:**pg 145  Ex 11.2 nos 3 – 7 |  |
| e) solve problems involving money. | **[Book MIE7]:** To study notes & 2 worked examples (pg  139 – 142). | **[Book MIE7]:**pg 141  Ex 11.1 nos 1 - 5 | **[Book MIE7]:**pg 141 Ex 11.1 nos 6 – 10  **[Book MW1]:** pg  65-70 nos 1-10 |  |

**2.5Time**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) express times in terms of the 12 – hour and  24 – hour clock; | **[Book MIE7]:** To study notes & 1 worked example (pg 146, 148). | **[Book MIE7]:**pg 147  Ex 12.1; pg 149 Ex  12.3 nos 1 – 3 |  |  |
| b) convert times from one unit to another (hour, minute, second); | **[Book MIE7]:** To study notes & 1 worked examples (pg 147). | **[Book MIE7]:**pg 147 –  148 Ex 12.2 nos  1(a,c),2(a,b),3(a,c),4,  5(a | **[Book MIE7] :**pg 147 – 148 Ex 12.2  **[Book MW1]:** pg  72-73 nos 1-4; pg  74-75 nos 7-9 |  |
| c) use GMT in practical situations; | **[Book MIE7]:** To study notes & 3 worked examples (pg  151 – 154). | **[Book MIE7]:**pg 153  Ex 12.6 nos 1 – 5; pg  154 Ex 12.7 nos 1 – 3 | **[Book MW1]:** pg 73-74 nos 5, 6; pg 75 no 10 | Understanding time zone ([https://www.youtube.co](https://www.youtube.com/watch?v=X1DkiuaFCuA)  [m/watch?v=X1DkiuaFCuA](https://www.youtube.com/watch?v=X1DkiuaFCuA)  ) |
| d) solve real life problems involving time. | **[Book MIE7]:** To study notes & 2 worked examples (pg  150 – 151). | **[Book MIE7]:**pg 150  Ex 12.4 nos 1 – 2; pg  151 Ex 12.5 nos 1 – 4 | **[Book MIE7] :**pg 151  Ex 12.5 nos 5 – 9 | Time differences  ([https://www.youtube.co](https://www.youtube.com/watch?v=SnkUkc23YC0)  [m/watch?v=SnkUkc23YC0](https://www.youtube.com/watch?v=SnkUkc23YC0)  ) |

**Mid Second Term Assessment**

| **Component** | **Time Allocation** | **Type** |  | **Maximum Mark** |
| --- | --- | --- | --- | --- |
|  | 1 hour | Short questions  structured questions | and | 50 |

The Paper will consist of short and structured questions. Neither mathematical tables nor slide rules nor calculators will be allowed in this paper. Omission of essential working will result in loss of marks. Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus for Grade 7 first and second term covered till the assessment, the Syllabus for Grades 1 to 6 for exams in 2019 and questions will not necessarily be restricted to a single topic.

**Topic: 2.6Speed**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) demonstrate an understanding of the terms speed and average speed; | **[Book MIE7]:** To study notes & 10 worked examples (pg 155 – 1). | **[Book MIE7]:**pg 157  Ex 13.1 nos 1; pg 158  Ex 13.2 nos 1; pg 159  Ex 13.3 nos 1; | **[Book MIE7]:**pg 157  Ex 13.1 nos 3– 6; pg 158 Ex 13.2 nos 3– 8; pg 159 Ex 13.3 nos 3  – 6 | ● Understanding rate ([https://www.youtube. com/watch?v=RQ2nYU](https://www.youtube.com/watch?v=RQ2nYUBVvqI)  [BVvqI](https://www.youtube.com/watch?v=RQ2nYUBVvqI)) |
| b) convert speed from one unit to another; | **[Book MIE7]:** To study notes & 3 worked examples (pg  162 – 163). | **[Book MIE7]:**pg 162 –  163 Ex 13.5 nos 1  (a,b)– 2(a,b); pg 163 Ex 13.6 nos 1 – 2. | **[Book MIE7]:**pg 162 – 163 Ex 13.5 ; pg 163 Ex 13.6 nos 3 – 5. |  |
| c) solve real life problems involving speed (including average speed). | **[Book MIE7]:** To study notes & 7 worked examples (pg  155 – 161). | **[Book MIE7]:**pg 157  Ex 13.1 nos 2; pg 158  Ex 13.2 nos 2; pg 159  Ex 13.3 nos 2; pg 161  Ex 13.4 nos 1 – 3 | **[Book MIE7]:**pg 157  Ex 13.1 nos 3– 6; pg 158 Ex 13.2 nos 3– 8; pg 159 Ex 13.3 nos 3 – 6; pg 161 Ex 13.4 nos 4 – 9  **[Book MW1]:** pg  77-84 nos 1-16 | ● Word problems  ([https://www.youtube. com/watch?v=wdL8Kp](https://www.youtube.com/watch?v=wdL8KpF5Ov0)  [F5Ov0](https://www.youtube.com/watch?v=wdL8KpF5Ov0)) |

**Topic: 2.7Mass**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) distinguish among different units of mass:  mg, g, kg and tonnes (t); | **[Book MIE7]:** To study notes (pg 164). | **[Book MIE7]:**pg 164  Ex 14.1 |  | The metric system  ([https://www.youtube.co m/watch?v=ZNX-a-5jGeM](https://www.youtube.com/watch?v=ZNX-a-5jGeM) |
| b) convert mass from one unit to another; | **[Book MIE7]:** To study notes & 1 worked examples (pg  165 – 166). | **[Book MIE7]:**pg 165 166 Ex 14.2 nos  1(a,b,c,h),2– 4 | **[Book MIE7]:**pg 165 -  166 Ex 14.2 | How to convert units ([https://www.youtube.co m/watch?v=jqmIbcId3B0](https://www.youtube.com/watch?v=jqmIbcId3B0)) |
| c) perform arithmetic operations involving mass; | **[Book MIE7]:** To study notes & 4 worked examples (pg  166 – 167). | **[Book MIE7]:**pg 167  Ex 14.3 nos 1 – 3 |  |  |
| d) solve word problems involving mass. | **[Book MIE7]:** To study notes & 1 worked examples (pg 168). | **[Book MIE7]:**pg 168 – 169 Ex 14.4 nos 1 – 5. | **[Book MIE7]:**pg 168 – 169 Ex 14.4 nos 6 – 9.  **[Book MW1]:** pg  86-89 nos 1-7 |  |

**Topic: 2.8Algebraic expressions and algebraic equations**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) use letters to represent unknown quantities; | **[Book MIE7]:** To study notes (pg 170 – 171).  **[WEM1]:** Unit 5; To study worked examples nos 2-4, 14, 15. | **[Book MIE7]:**pg 170  Ex 15.1; pg 172 Ex  15.2 |  | Algebra basics  ([https://www.youtube.co](https://www.youtube.com/watch?v=NybHckSEQBI)  [m/watch?v=NybHckSEQBI](https://www.youtube.com/watch?v=NybHckSEQBI)  ) |
| b) recognise algebraic terms, coefficients and expressions; | **[Book MIE7]:** To study notes & 2 worked examples (pg  172 – 174). | **[Book MIE7]:**pg 172 Ex 15.3; pg 173 Ex  15.4; pg 174 Ex 15.5 |  |  |
| c) perform addition and subtraction of algebraic expressions; | **[Book MIE7]:** To study notes & 2 worked examples (pg 174 – 175).  **[WEM1]:** Unit 5; To study worked examples nos 6, 9(a), 11. | **[Book MIE7]:**pg 175  Ex 15.6; pg 175 Ex  15.7 | **[Book MW1]:** pg  91-93 no 1; pg  109-111 no 9 |  |

| d) perform multiplication and division of simple algebraic expressions; | **[Book MIE7]:** To study notes & 3 worked examples (pg 176 – 177).  **[WEM1]:** Unit 5; To study worked examples no 1. | **[Book MIE7]:**pg 177  Ex 15.8; pg 177 Ex  15.9 |  |  |
| --- | --- | --- | --- | --- |
| e) expand and simplify algebraic expressions involving brackets of the form m(x+y) where m is a whole number, fraction or decimal; | **[Book MIE7]:** To study notes & 4 worked examples (pg 178 – 179).  **[WEM1]:** Unit 5; To study worked examples nos 8, 10, 12, 13. | **[Book MIE7]:**pg 178  Ex 15.10; pg 178 Ex  15.11; pg 179 Ex  15.12; pg 179 Ex  15.13 | **[Book MW1]:** pg  93-96 no 2 | Simplifying algebraic expressions  ([https://www.youtube.co m/watch?v=uqKY7dK\_DF](https://www.youtube.com/watch?v=uqKY7dK_DFQ)  [Q](https://www.youtube.com/watch?v=uqKY7dK_DFQ)) |
| f) substitute numbers in algebraic expressions; | **[Book MIE7]:** To study notes & 1 worked examples (pg 180).  **[WEM1]:** Unit 5; To study worked examples nos 5, 7, 9. | **[Book MIE7]:**pg 180  Ex 15.14 | **[Book MW1]:** pg  107-108 nos 8 |  |

| g) distinguish between an algebraic expression and an algebraic equation; | **[Book MIE7]:** To study notes (pg 180 – 181). | **[Book MIE7]:**pg 182  Ex 15.15 |  |  |
| --- | --- | --- | --- | --- |
| h) demonstrate an understanding of additive and multiplicative inverses; | **[Book MIE7]:** To study notes (pg 182 – 183). | **[Book MIE7]:**pg 183  Ex 15.16 |  |  |
| i) solve simple linear equations involving additive and multiplicative inverse. | **[Book MIE7]:** To study notes & 4 worked examples (pg  183 – 186). | **[Book MIE7]:**pg 184  Ex 15.17; pg 184 Ex  15.18; pg 185 Ex  15.19; pg 186 Ex 15.20. | **[Book MW1]:** pg  96-106 no 3-7; pg  111-114 no10 | * Solving simple equations involving addition and subtraction   ([https://www.youtube. com/watch?v=l3XzepN](https://www.youtube.com/watch?v=l3XzepN03KQ)  [03KQ](https://www.youtube.com/watch?v=l3XzepN03KQ))   * Solving simple equations involving multiplication and   division  ([https://www.youtube. com/watch?v=Qyd\_v3](https://www.youtube.com/watch?v=Qyd_v3DGzTM)  [DGzTM](https://www.youtube.com/watch?v=Qyd_v3DGzTM)) |
| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| ***Students should be able to:***  a) identify the axes in a Cartesian plane (*x*-*y* plane); | **[Book MIE7]:** To study notes (pg 194 – 196). |  |  |  |
| b) locate and plot points in the Cartesian plane; | **[Book MIE7]:** To study notes & 2 worked examples (pg  196 – 198). | **[Book MIE7]:**pg 198  Ex 17.1 nos 1 – 13 | **[Book MW1]:** pg  121-122 nos 1, 2 | Understanding the Cartesian plane and plotting points  ([https://www.youtube.co](https://www.youtube.com/watch?v=9Uc62CuQjc4) |

**Topic: 2.9Patterns and Sequences**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) Identify and complete number patterns. | **[Book MIE7]:** To study notes & 1 worked example (pg 190). | **[Book MIE7]:**pg 188  Ex 16.1 nos 1(a-d),  2,3(a-d),4,5; pg 190 – 191 Ex 16.2 nos 1 – 2; pg 192 Ex 16.3 (a,f); pg 193 Ex 16.4 nos  1,2. | **[Book MIE7]:**pg 188  Ex 16.1 nos 1,3,6; pg  190 – 191 Ex 16.2 nos 3 – 4; pg 192 Ex 16.3; pg 193 Ex 16.4 nos 3 5  **[Book MW1]:** pg  116-119 nos 1-4 | Understanding pattern and sequences  ([https://www.youtube.co m/watch?v=9zaH6rKZXjg](https://www.youtube.com/watch?v=9zaH6rKZXjg)) |

**Topic: 2.10Coordinates**

|  |  |  |  | [m/watch?v=9Uc62CuQjc4](https://www.youtube.com/watch?v=9Uc62CuQjc4)  ) |
| --- | --- | --- | --- | --- |
| c) determine the equation of lines parallel to the x and y axes | **[Book MIE7]:** To study notes & 2 worked examples (pg  201 – 203). | **[Book MIE7]:** pg 203  Ex 17.2 nos 1 – 8 | **[Book MW1]:** pg 123 no 3 |  |
| d) draw lines in the form x=h and y=k, where h and k are constants; | **[Book MIE7]:** To study notes & 2 worked examples (pg  201 – 203). | **[Book MIE7]:** pg 203-204 Ex 17.2 nos  9, 10 | **[Book MW1]:** pg 124 no 4 |  |
| e) find point of intersection of horizontal and vertical lines. | **[Book MIE7]:** To study notes & 1 worked example (pg 205 – 206). | **[Book MIE7]:**pg 205 Ex 17.3 nos 1 – 7. | **[Book MW1]:** pg  125-127 nos 5-7 |  |

**July Assessment**

| **Component** | **Time Allocation** | **Type** |  | **Maximum Mark** |
| --- | --- | --- | --- | --- |
|  | 2 hour | Short answer  structured questions | and | 100 |

The Question Paper will consist of about 20 short answer and structured questions. Neither mathematical tables nor slide rules nor calculators will be allowed in this paper. Omission of essential working will result in loss of marks. Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus for Grade 7 first term and second term, the Syllabus for Grades 1 to 6 for exams in 2019 and questions will not necessarily be restricted to a single topic.

# **THIRD TERM [1**1**/08/202**5 **– 3**1**/10/202**5**]**

**Topic: 3.1Symmetry**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) determine the number of lines of symmetry in plane shapes; | **[Book MIE7]:** To study notes (pg 207 – 208).  **[WEM1]:** Unit 8; To study worked examples nos 1, 5,  7(a), 12 | **[Book MIE7]:**pg 214 –  216 Ex 18.2 no 1 |  | Understanding reflectional symmetry ([https://www.youtube.co m/watch?v=MtqtIiJsfiE](https://www.youtube.com/watch?v=MtqtIiJsfiE)) |
| b) locate and draw the line(s) of symmetry in a given shape; | **[Book MIE7]:** To study notes & 1 worked example (pg 208 – 213).  **[WEM1]:** Unit 8; To study worked examples nos 2, 6, 11. | **[Book MIE7]:**pg 210 –  212 Ex 18.1 nos  1(a,b), 2(a,b), 3,  4(a,b), 5,6,8; pg 214 –  216 Ex 18.2 no 3, 5 | **[Book MIE7]:**pg 210 –  212 Ex 18.1 nos 1, 2,  4,7; pg 214 – 216 Ex  18.2 nos 2,4  **[Book MW1]:** pg  129-133 nos 1-3 |  |
| c) complete plane figures line(s) of symmetry (horizontal, vertical and slant). | **[Book MIE7]:** To study notes & 1 worked example (pg 216 – 217). | **[Book MIE7]:**pg 214 –  216 Ex 18.2 no 6; pg 218 – 220 Ex 18.3 no  1(a,b),2(a,b)3,6. | **[Book MIE7]:**pg 218 –  220 Ex 18.3 nos  1,2,4,5,7. |  |
|  | **[WEM1]:** Unit 8; To study worked examples nos 3, 4, 8, 10, 13, 14. |  | **[Book MW1]:** pg  134-136 nos 4-8 |  |

**Topic: 3.2Geometrical Constructions**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) perform simple geometrical constructions using ruler, set squares, protractor; a pair of  compasses and dividers as well as digital tools; | **[Book MIE7]:** To  study notes (pg 221 –  222). | **[Book MIE7]:**pg  Ex 19.1 | 222 | **[Book MW1]:** pg  138-139 nos 1-3 |  |
| b) construct a line parallel to given line; | **[Book MIE7]:** To study notes (pg 223). | **[Book MIE7]:**pg  Ex 19.2 | 224 | **[Book MW1]:** pg 143 no 11 |  |
| c) construct a line parallel to a given line passing through a given point; | **[Book MIE7]:** To study notes (pg 224). | **[Book MIE7]:**pg  Ex 19.3 | 225 | **[Book MW1]:** pg 143 no 12 |  |
| d) construct the perpendicular bisector of a line segment; | **[Book MIE7]:** To  study notes (pg 225 –  226). | **[Book MIE7]:**pg  Ex 19.4 | 226 | **[Book MW1]:** pg  139-140 nos 4, 5 | How to construct perpendicular bisector ([https://www.youtube.co](https://www.youtube.com/watch?v=IQ35R6CWqd8) |

|  |  |  |  | [m/watch?v=IQ35R6CWqd](https://www.youtube.com/watch?v=IQ35R6CWqd8)  [8](https://www.youtube.com/watch?v=IQ35R6CWqd8)) |
| --- | --- | --- | --- | --- |
| e) construct the bisector of an angle. | **[Book MIE7]:** To study notes (pg 227). | **[Book MIE7]:**pg 227 Ex 19.5. | **[Book MW1]:** pg 140 nos 6; pg 142 nos 9,  10 | How to construct angle  bisector  ([https://www.youtube.co m/watch?v=2lP1NKYLKQ w](https://www.youtube.com/watch?v=2lP1NKYLKQw)) |
|  |  |  | **[Book MW1]:** pg  144-145 nos 13, 14 |  |

**Mid Third Term Assessment**

| **Component** | **Time Allocation** | **Type** |  | **Maximum Mark** |
| --- | --- | --- | --- | --- |
|  | 1 hour | Short questions  structured questions | and | 50 |

The Paper will consist of short and structured questions. Neither mathematical tables nor slide rules nor calculators will be allowed in this paper. Omission of essential working will result in loss of marks. Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus for Grade 7 first term, second term and third term covered till the assessment, the Syllabus for Grades 1 to 6 for exams in 2019 and questions will not necessarily be restricted to a single topic.

**Topic: 3.3Reflection**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) demonstrate an understanding of the notion of reflection; | **[Book MIE7]:** To study notes (pg 229 – 230). |  |  | Understanding reflection ([https://www.youtube.co m/watch?v=A8fX2Drlpng](https://www.youtube.com/watch?v=A8fX2Drlpng)) |
| b) reflect points, line segments and polygons in lines of reflection; | **[Book MIE7]:** To study notes (pg 230 – 231). | **[Book MIE7]:**pg 231  Ex 20.1 | **[Book MW1]:** pg  147-148 nos 1-3; pg  149-150 no 6, 7 |  |
| c) reflect figures and shapes in lines of  reflection; | **[Book MIE7]:** To study notes & 1 worked example (pg 232 – 235). | **[Book MIE7]:**pg 234  Ex 20.2 (a,b,d); pg  235 Ex 20.3 no 1 | **[Book MIE7]:**pg 234  Ex 20.2; pg 235 Ex  20.3 no 2 |  |
| d) locate the line of reflection given the object and the image (through construction). | **[Book MIE7]:** To study notes & 2 worked examples (pg  236 – 237). | **[Book MIE7]:**pg 237 Ex 20.4 nos 1-4. | **[Book MIE7]:**pg 237 Ex 20.4 nos 5-9.  **[Book MW1]:** pg 148 nos 4, 5; pg 150 no 8 |  |

**Topic: 3.4Sets**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) demonstrate an understanding of the concept of sets; | **[Book MIE7]:** To study notes & 2 worked examples (pg 240 –  242).  **[WEM1]:** Unit 8; To study worked examples nos 12  **[Book MT1]:** To study notes & 4 worked examples (p177 – 180) | **[Book MIE7]:**pg 242  Ex 21.1 |  |  |
| b) distinguish among different types of sets; | **[Book MIE7]:** To study notes & 6 worked examples (pg 244 –  250).  **[WEM1]:** Unit 8; To study worked examples nos 3, 4, 13,  14 | **[Book MIE7]:**pg 245  Ex 21.4; pg 246 Ex  21.5; pg 247 Ex 21.6,  Ex 21.7; pg 248 Ex  21.8; pg 250 Ex 21.9 |  |  |

|  |  | **[Book MT1]:** To study notes & 4 worked examples (p177 – 180) |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| c) | identify and use set notations; | **[Book MIE7]:** To study notes & 1 worked examples (pg 243 –  256).  **[WEM1]:** Unit 4; To study worked examples nos 1, 11 **[Book MT1]:** To study notes & 4 worked examples (p177 – 180) | **[Book MIE7]:**pg 243  Ex 21.2 |  |  |  |
| d) | find the cardinal number of a given set; | **[Book MIE7]:** To study notes & 1 worked example (pg 244) 5  **[WEM1]:** Unit 8; To study worked examples nos 2  6  **[Book MT1]:** To study notes & 4 worked examples (p177 – 180) | **[Book MIE7]:**pg 244  Ex 21.3 |  |  |  |
| e) | find the union and intersection of 2 sets; | **[Book MIE7]:** To study notes & 1 worked example (pg 250 –  251). | **[Book MIE7]:**pg 250  Ex 21.10; pg 251 Ex  21.11; pg 251 Ex  21.12 | **[Book MW1]:**  152-153 no 1, 2 | pg |  |

|  |  | **[Book MT1]:** To study notes & 4 worked examples (p177 – 180) |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| f) | represent 2 sets in a Venn Diagram; | **[Book MIE7]:** To study notes & 2 worked examples (pg 252 –  253).  **[WEM1]:** Unit 8; To study worked examples nos 5-9  **[Book MT1]:** To study notes & 4 worked examples (p177 – 180) | **[Book MIE7]:**pg 254  Ex 21.13 | **[Book MW1]:**  154-159 nos 3-8 | pg | Introduction of set concepts and Venn  diagrams  ([https://www.youtube.co m/watch?v=Jt-S9J947C8](https://www.youtube.com/watch?v=Jt-S9J947C8)) |
| g) | Shade required regions in a Venn Diagram | **[Book MIE7]:** To study notes & 1 worked examples (pg 254 –  255).  **[WEM1]:** Unit 8; To study worked examples nos 10  **[Book MT1]:** To study notes & 4 worked examples (p177 – 180) | **[Book MIE7]:**pg 256  Ex 21.14 | **[Book MW1]:**  159-162 nos 9-17 | pg | ● |

**Topic: 3.5Statistics**

| **Learning Objectives** | **Worked Examples** | **Classwork & Homework** | **Extra Work** | **Resources** |
| --- | --- | --- | --- | --- |
| ***Students should be able to:***  a) collect, classify and tabulate statistical data; | **[Book MIE7]:** To study notes (pg 257 – 258). | **[Book MIE7]:**pg 259  Ex 22.1 |  | Understanding frequency distriutions  ([https://www.youtube.co m/watch?v=1g-VVV0f0gg](https://www.youtube.com/watch?v=1g-VVV0f0gg)) |
| b) construct and use frequency tables, pictograms and bar charts; | **[Book MIE7]:** To study notes & 3 worked examples (pg  260 – 265). | **[Book MIE7]:**pg 262 –  263 Ex 22.2 nos 2, ;pg 266 – 267 Ex 22.3 nos 1, 2, 5, 6. | **[Book MIE7]:** pg 269 Ex 22.3 nos 7. | Understanding bar chart and pictogram [https://www.youtube.co m/watch?v=ExN8RxsaS8c](https://www.youtube.com/watch?v=ExN8RxsaS8c)) |
| c) interprete data in pictograms and bar charts. | **[Book MIE7]:** To study notes & 3 worked examples (pg  260 – 265). | **[Book MIE7]:**pg 262 – 263 Ex 22.2 nos 1, 3; pg 266 – 267 Ex 22.3 nos 3, 4. | **[Book MIE7]:**pg 262 – 263 Ex 22.2 nos 4;  **[Book MW1]:** pg 164 nos 1-4 |  |

**October Assessment**

| **Component** | **Time Allocation** | **Type** | **Maximum Mark** |
| --- | --- | --- | --- |
|  | 2 hour | Short answer and structured questions | 100 |

The Question Paper will consist of about 20 short and structured questions. Neither mathematical tables nor slide rules nor calculators will be allowed in this paper. Omission of essential working will result in loss of marks. Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus for Grade 7, the Syllabus for Grades 1 to 6 for exams in 2019 and questions will not necessarily be restricted to a single topic.