P.6 MATHEMATICS SCHEME TERM II

WK	PD	THEME	TOPIC	SUB TOPIC	COMPETENCES		CONTENT	METHOD	ACTIVITIES	SKILLS	T/A	REF
					Subject	Language						
1	1	Numeracy	Fractions	multiplication of whole by fractions and vice versa	The learner; multiplies fractions and whole correctly	The learner; Reads, uses the key words	**Example 1** Multiply : 6 x $\frac{2}{3}$ $\frac{6}{1}$ x $\frac{2}{3}$ = $\frac{12^{4}}{3_{1}}$ = **4 answer** **Example 2** Calculate $\frac{3}{4}$ of 12 $\frac{3}{4}$ x $\frac{12}{1}$ = $\frac{36^{9}}{4_{1}}$ = **9 answer**	• Guided discovery • Brain storming	• Multiplying fractions by wholes	• Effective communication • Problem solving	• Counters , fruits	• New MK primary maths book 6 page 46 • Fountain book 6 page 60 – 61
2	2	Numeracy	Fractions	Multiplication of a fraction by a fraction	The learner; multiplies fractions correctly	The learner; Reads, spells, uses words like product, -numerator -denominator	**Example 1** Simplify : $\frac{3}{4}$ x $\frac{1}{2}$ = $\frac{3x1}{4x2}$ = $\frac{3}{8}$ **answer** **Example 2** What is $\frac{2}{5}$ of $\frac{3}{4}$ = $\frac{2x3}{5x4}$ = $\frac{6^{3}}{20_{10}}$ = $\frac{3}{10}$ **answer** **Example 3** 2 Workout $2\frac{1}{3}$ x $1\frac{1}{5}$ = $\frac{7}{3}$ x $\frac{6}{5}$ = $\frac{7x2}{1x5}$ = $\frac{14}{5}$ = $\mathbf{1\frac{4}{5}}$ **ans** **1**	• Guided discussion • Guided discovery	• Multiplying fractions by fractions	• Critical thinking • Effective communication	• Charts showing working and chalkboard illustration	• New MK primary MTC book 6 page 47 • Fountain MTC book 6 page 61

1	**3**	Numeracy	Fractions	Finding reciprocal	The learner; Finds the reciprocal of fractions	The learner; Reads, spells, pronounces and writes the words -multiplicative - inverse, -reciprocal	**Example 1** What is the reciprocal of 4 Let it be K 4 x k = 1 4k = 1 $\frac{4k}{4} = \frac{1}{4} =$ K = $\frac{1}{4}$ **answer** **Example 2** Find the reciprocal of $\frac{3}{5}$ $\frac{3}{5}$ x t = 1 5 x $\frac{3t}{5}$ = 1 x5 $\frac{3t}{5} = \frac{5}{3}$ t = $\frac{5}{3}$ = **1** $\frac{2}{3}$ **answer** **Examples 3** What number must be multiplied by 0.7 to give 1? Let the number be P 0.7 x P = 1 $\frac{7}{10}$ x P = 1 10 x $\frac{7P}{10}$ = ~~1~~ x 10 $\frac{7p}{7} = \frac{10}{7} = \frac{10}{7}$ P = **1** $\frac{3}{7}$ **answer**	• Inquiry • Brain storming • Problem solving	• Finding the reciprocals of numbers	• Effective communication • Creative thinking	• Charts and text books	• MK Primary <TC book 6 page 48
1	**4**	Numeracy	Fractions	Division of wholes by fraction and vice versa	The learner; divides fractions	The learner; Reads, spells, pronounces and used the words -Quotient -Divided -Divisor	**Example 1** Divide 2 by $\frac{2}{3}$ $2 \div \frac{2}{3} = \frac{2}{1} \times \frac{3}{2} = \frac{1x3}{1x1} = \frac{3}{1} =$ **3 answer** **Example 2** If $4\frac{1}{2}$ is divided, 36 is the divisor. Find their quotient $4\frac{1}{2} \div 36 = \frac{9}{2} \div \frac{36}{1} = \frac{9}{2} \times \frac{1}{36} = \frac{1x1}{2x4} = \frac{1}{8}$ **answer**	• Guided discovery • Brain storming	• Dividing numbers	• Effective communication • Problem solving	• Chalkboard illustration	• MK. Primary MTC book 6 page 49 • Fountain MTC book 6 page 62.

1	5	Numeracy	Fractions	Division of fraction by fraction	The learner; Divides fractions by fraction	The learner; Reads, spells, pronounces and writes the key words	**Example 1** Divide : $\frac{1}{4} \div \frac{1}{3}$ $\frac{1}{4} \div \frac{1}{3} = \frac{1}{4} \times \frac{3}{1} = \frac{3}{4}$ **answer** **Example 2** Divide $2\frac{1}{2} \div 1\frac{1}{3}$ $\frac{5}{2} \div \frac{4}{3} = \frac{5}{2} \times \frac{3}{4} = \frac{15}{8} = 1\frac{7}{8}$ **answer** **Example 3** Simplify: $4\frac{1}{2} \div 1\frac{1}{3}$ $\frac{9}{2} \div \frac{4}{3}$ $= \{\frac{9}{2} \times 6 \div \frac{4}{3} \times 6\}$ $= 9 \times 3 \div 4 \times 2$ $= 27 \div 8$ $= \frac{27}{8}$ $= 3\frac{3}{8}$ **answer** **Method 2** $4\frac{1}{2} \div 1\frac{1}{3} = \frac{9}{2} \div \frac{4}{3}$ $= \frac{9}{2} \times \frac{4}{3}$ $= \frac{9x3}{2x4}$ $= \frac{27}{8}$ $= 3\frac{3}{8}$	• Inquiry • Brain storming • Guided discovery	• Dividing fractions	• Critical thinking • Effective communication	• Chalkboard illustration and Charts showing worked example	• MK primary maths book 6 page 50 • Fountain mtc book 6 pg 62-64 • Fountain nook 6 page 65

Example 4
Workout

$$\frac{3}{5} + \frac{1}{10}$$

2

$$\frac{3}{\cancel{5}} + \frac{\cancel{10}}{1}$$

1

$$\frac{3x2}{1x1}$$

$$\frac{6}{1}$$

6 answer

1	**6**	Numeracy	Fractions		The learner; Adds, subtracts, multiplies and divides fractions Applies BODMAS		**Example 1** Divide $\frac{1}{2}$ of (15÷ 3) BODMAS $\frac{1}{2}$ of (15 ÷ 3) = $\frac{1}{2}$ of 5 = $\frac{1}{2}$ x $\frac{5}{1}$ = $\frac{5}{2}$ = $2\frac{1}{2}$ **answer** **Example 2** Workout : $\frac{2}{3}$ of $\frac{3}{4}$ - $\frac{1}{3}$ + $\frac{1}{2}$ BODMAS $\left\{\frac{2}{3} \text{ of } \frac{3}{4}\right\} - \frac{1}{3} + \frac{1}{2}$ $\frac{2}{3} \times \left\{\frac{\overset{1}{\cancel{3}}}{\underset{1}{\cancel{4}}} - \frac{\overset{1}{\cancel{1}}}{\underset{2}{\cancel{3}}} + \frac{1}{2}\right\}$ = $(\frac{\overset{1}{\cancel{2}}}{\underset{1}{\cancel{3}}} \times \frac{\overset{1}{\cancel{3}}}{\underset{2}{\cancel{4}}}) - \frac{1}{3} + \frac{1}{2}$ = $\frac{1}{2} + \frac{1}{2} - \frac{1}{3}$ = LCD ÷ 6 $= \frac{(\frac{1}{2} \times 6) + (\frac{1}{2} \times 6) - (\frac{1}{3} \times 6)}{6}$ $= \frac{3+3-2}{6}$ $= \frac{\overset{2}{\cancel{4}}}{\underset{3}{\cancel{6}}} = \frac{2}{3}$ **answer** **Method 2** $\frac{1}{2} + \frac{1}{2} - \frac{1}{3}$ LCM = 6 $\frac{1}{2} + \frac{1}{2} - \frac{1}{3} = \frac{3+3-2}{6}$ $\frac{6-2}{6}$ $\frac{4^2}{6}$ $\frac{2}{3}$		• Guided discussion • Guided discovery • Brain storming	• Applying the knowledge of BODMAS	• Problem solving • Effective communication	• Chalk board illustration	• MK Primary MTC book 6 page 51 • Fountain MTC book 6 page 65

Example 3

Evaluate

$$1\frac{1}{2} - 2\frac{1}{3} + 1\frac{1}{4}$$

BODMAS

$$1\frac{1}{2} + 1\frac{1}{4} - 2\frac{1}{3}$$

$$\frac{3}{2} + \frac{5}{4} - \frac{7}{3}$$

LCD (12)

$$\frac{(\frac{3}{2} x12) + \frac{5}{4} X12) - (\frac{7}{3} x12)}{12}$$

$$\frac{(3x6) + (5x3) - 7x4)}{12}$$

$$\frac{33 - 28}{12}$$

$$\frac{5}{12}$$

Example 4

Simplify: $1\frac{1}{3} \times \frac{3}{5} + \frac{1}{4} \div 1\frac{1}{2} - \frac{3}{4}$

$$= \frac{4}{3} \times \frac{3}{5} + \left\{\frac{1}{4} \div \frac{3}{2}\right\} \frac{3}{4}$$

$= \frac{4}{3} \times \frac{3}{5} + \left\{\frac{1}{4} \times \frac{3}{2}\right\} - \frac{3}{4}$

$= \frac{4}{3} \times \frac{3}{5} + \left\{\frac{1}{\cancel{4}_{2}} \div \frac{\cancel{2}^{1}}{3}\right\} - \frac{3}{4}$

$= \frac{4}{\cancel{3}_{1}} \times \frac{\cancel{3}^{1}}{5} + \frac{1}{6} - \frac{3}{4}$

$= \frac{4}{5} + \frac{1}{6} - \frac{3}{4}$

LCD = 60

$\left\{\frac{1}{6} \times 60\right\} + \left\{\frac{1}{6} \times 60\right\} - \left\{\frac{1}{6} \times 60\right\}$

$\frac{48+10-45}{60}$

$\frac{52-45}{60} = \frac{13}{60}$ **answer**

1	**7**	Numeracy	Fractions	Addition of decimals	The learners add decimals correctly	The learner Reads, spells, pronounces and uses the key word -point -decimal places -sum	**Example s** Add: 4.8 + 6.75 + 15. 579 4.800 6.750 + 15.579 **27.129 answer** **Example 2** A rope is 8.36m long . Another rope is 6.78m long. What is the total length of the two ropes? 8.36m + 6.78m **15.14m answer**	• Guided discovery • Whole class discussion	• Adding decimals	• Critical thinking • Effective communication	• Chalk board illustration and cahrts	• MK Primary MTC book 6 page 55 • Fountain MTC book 6 page 70 - 71
2	**1**	Numeracy	Fractions	Subtraction of decimal	The learner; Subtracts decimals	The learner; Reads, spells, pronounces and writes the words difference and take away	**Example 1** Subtract 6.506 from 9.23 9. 2 3 0 -6 . 5 0 4 **2. 7 2 6 answer** **Example 2** Alex lost 1.8 points out of 9.6. How many points did he score Out of 9 . 6 Lost 1 . 8 Scored **7 . 8 answer**	• Inquiry • Brain storming	• Subtracting decimals	• Problem solving • Effective communication	• Chalkboard illustration and charts	• MK Primary MTC book 6 page 56
2	**2**	Numeracy	Fractions	Addition and subtraction of decimals	The learner; Identifies the operation symbols Rearranges correctly	The learner; Reads, spells and pronounces the words	**Example 1** Workout: 7.1 – 0.8 + 1.4 (7.1 + 1.4) – 0.8 7 . 1 8 . 5 + 1 . 4 - 0 . 8 8 . 57 . 7 points **Example 2** Our football team scored 6.5 points, lost 8.2 and later gained 2.7. What was the total score? (6.5+2.7) – 8.2 6 . 5 9 . 2 + 2 . 7 - 8 . 2 9 . 21 . 0 points Therefore the total score was 1.0 points	• Guided discovery • Problem solving	• Adding and subtracting	• Creative thinking	• Charts	• MK Primary MTC book 6 page 57

2	**3**	Numeracy	Fractions	Multiplication of decimals	The learner; Multiplies decimals correctly	The learner; Reads, spells, pronounces and uses the key words -product -times	**Example 1** Multiply : 3 . 75 x 18 Or 3 . 75 x 18 3 0 0 0 + 3 7 5 06750 6 7. 50 375 x 18675 100 1 10 67.5 100 **Example 2** Find the product of 0.17 and 0.5 $\frac{17}{100} \times \frac{5}{10}$ Or 0 . 17 D.Ps = 3 x 0 5 $\frac{85}{1000}$ 0 8 5 + 0 0 0 0.085 **=0.085 answer**	• Guided discovery • Whole class discussion	• Multiplying decimals	• Creative thinking • Effective communication • Problem solving	•	• MK Primary MTC book 6 page 58-60
2	**4**	Numeracy	Fractions	Division of decimals	The learner; Divides decimals	The learner; Reads, spells, Pronounces and used the key words -share -divide -quotient -division	**Example 1** Divide : 24 ÷ 0.03 8 $24 \div \frac{3}{100} = \frac{24}{1} \times \frac{100}{3} = 8 \times 100 =$ **800** 1 **Example 2** Simplify : 20 .4 ÷ 0.2 $\frac{204}{10} \div \frac{2}{10} = \frac{204}{10} \times \frac{10}{2} = \frac{102x1}{1x1} = \frac{102}{1} =$ **102** 102 1	• Guided discussion • Guided discovery	• Dividing decimals	• Effective communication • Critical thinking	• Charts showing worked examples	• MK Primary MTC book 6 page 61–63

2	**5**	Numeracy	Fractions	Multiplication and division of decimals	The learner; Multiplies decimals Divides decimals	The learner; Reads, spells, pronounces and uses key words -product -share	**Example 1** Divide : 24 ÷ 0.03 $24 \div \frac{3}{100} = \frac{24}{1} \times \frac{100}{3}$ = 8 x 100 = **800** **Example 2** Workout: (0.12 + 0.2)÷ 0.8 0 . 12 + 0. 2 0.32 0.32 ÷ 0.8 $\frac{32}{100} \div \frac{8}{10} = \frac{32}{10} \times \frac{10}{8} = \frac{4x1}{10x1} = \frac{4}{10}$ = **0.4** a) Workout: $\frac{4.2x1.6}{0.7}$ b) Workout: $\frac{0.18x12}{1.2-0.3}$	• Inquiry • Brain storming	• Multiplication • Multiplying and • Dividing decimals	• Problem solving • Effective communication • Creative thinking	• Chalkboard illustration	• MK Primary MTC book 6 page 64 – 65
2	**6**	Numeracy	Fractions	Expressing ratios as fractions and vice versa	The learner; Describes a ratio Expresses ratios as fractions	The learner, Reads, spells, pronounces and uses the words	**Example 1** Nankinga served $\frac{3}{5}$ of her birthday cake. Express the part served as a ratio $\frac{3}{5}$ = 3:5 **Example 2** The ratio of boys to girls in a class is 3:4. Express this as a fraction 3:4 = $\frac{3}{4}$	• Guided discovery • Inquiry	• Changing fractions as ratios	• Effective communication	•	• MK Primary MTC book 6 page 66 – 67

2	7	Numeracy	Fractions	Expressing quantinties as ratios	The learner Identifies quantities Expresses quantities to ratios	The learner; Reads, spells, pronounces and writes key words -ratio -quantities	**Example 1** James has 12 books and Jacob has 20 books. What is the ratio of James' books to Jacob's Jacob. 12: 20 3 5 $\frac{\cancel{12}}{\cancel{4}} : \frac{\cancel{20}}{\cancel{4}}$ 1 1 3: 5 Ratio = $\frac{Jame's books}{Jacob's books}$ 3 $\frac{12}{20}$ 5 **Example 2** Express 20minutes as a ratio of 1 hr (1hr = 60 mins) 20mins : 1 hour 20 mins : 60mins $\frac{\cancel{20}}{\cancel{10}} : \frac{\cancel{60}}{\cancel{10}}$ 1 3 $\frac{\cancel{2}}{\cancel{2}} : \frac{\cancel{6}}{\cancel{2}}$ 1 1 1 ÷ 3 $\frac{1}{3}$ **1.3**	• Guided discussion • Guided discovery	• Expressing quantities as ratios	• Problem solving • Effective communication • Creative thinking	•	• MK primary MTC book 6 page 128

							Example 3 Express 30cm as a ratio of 5m (1m = 100cn) 5m = 5 x 100cm = 500cm 30cm : 500cm $\frac{30}{10} : \frac{500}{10}$ 3 : 50 // $\frac{30}{500}$ $\frac{3}{50}$=3:50					
2	7	Numeracy	Fractions	Recurring of decimals	The learner' Divides common fractions Finds recurring decimals	The learner; Reads, spells and pronounces new words . Recurring	Express $\frac{5}{9}$ as a decimal $\frac{5}{9}$ = 5 ÷ 9 0.55… 9 ⟌ 50 0 50 -45 50 - 45 5 Therefore; $\frac{5}{9}$ = 0.5 **Example 2** Change $\frac{3}{11}$ to a decimal $\frac{3}{11}$ = 3 ÷ 11 0.2727 1 ⟌ 30 22 80 -77 30 - 22 80 - 77 3 Therefore; $\frac{3}{11}$ = 0.2727…	• Demonstration • Guided discovery	• Dividing fraction using long division	• Problem solving	• Chalkboard illustration	• Teacher's own collection

2	**8**	Numeracy	Fractions	Finding fractions for the recurring decimals	Forms an algebraic equations Solves algebraic equations Finds common fractions	The learner; Reads, spells and pronounces new words Recurring	Express 0.44 … as a common fraction in its lowest form . Let the fraction be p. P = 0.44… 10p = 4.44… 10p – p = 4.44 - 0.44 P= 4.00 1 $\frac{\cancel{9}p}{\cancel{9}} = \frac{4}{9}$ Therefore; P = $\frac{4}{9}$ 1	•	•	•	•	•
3	**1**	Numeracy	Fractions	Word application involvinging ratios	The learner; Solves problems involving ratios	The learner; Reads, spells and pronounces the key words	**Example 1** Mary and Joan have oranges in the ratio of 2:3 respectively. If many has 10 oranges, how many oranges does Joan have? Mary | Joan 2x | 3x 10 oranges | ? 2x = 10 1 5 $\frac{\cancel{2}x}{\cancel{2}} = \frac{\cancel{10}}{\cancel{2}}$ 1 1 x = 5 3x = 3 x 5 3x = 15 oranges **Therefore Joan has 15 oranges** **Or** Total ratio = 2 + 3 = 5 Total number of oranges be k $\frac{2}{5}$ of k = 10 $\cancel{5}$ x $\frac{2}{\cancel{5}}$ k = 10 x 5 2k = 50	• Guided discovery • Inquiry • Brain storming	• Solving problems involving ratios	• Critical thinking • Problem solving • Effective communication	• Chalk board illustration	• MK MTC book 6 page 129

							$\frac{\cancel{2}k}{\cancel{2}} = \frac{\cancel{50}^{25}}{\cancel{2}}$ 1 1 K = 25 Joan's share $\frac{3}{5}$ x 25 3x5 = **15 oranges**					
3	**2**	Numeracy	Fractions	Increasing quantities in a given ratio	The learner; Identifies quantities is a given ratio Increases quantities in a given ratio	The learner; Identifies quantities in a given ratio Increases quantities in a given ratio	**Example 1** Increase sh. 200 in the ratio of 5:4 New : Odd = New : old 5 : 4 = y :200 $\frac{5}{4} = \frac{y}{200}$ = LCD = 200 50 $\cancel{(200} \times \frac{5}{\cancel{4}}) = (\frac{yx\cancel{200}}{\cancel{200}})$ = (50 x5) = y 250 = y **y = 250/=** 1 **OR** $\frac{5}{4}$ of sh. 200 = $\frac{5}{1}$ x sh. 200 = 5 x sh. 50 = **sh. 250** **OR** New : old 5 : 4 ? : 200 4 parts = sh. 200	• Guided discovery • Brain storming	• Increasing quantities	• Critical thinking • Effective communication	•	• MK primary MTC book 6 page 130 • Fountain MTC book 6 page 79

							1 part = sh. $\frac{\cancel{200}^{50}}{\cancel{4}_{1}}$ 5 parts = sh. 50 x 5 **5 parts = sh. 250**					
3	**3**	Numeracy	Fractions	Finding the ratio of increase	The learner; Identifies the ratio of increase Finds the ratio of increase	The learner; Reads, spells, pronounces and uses the words -ratio -increase -add	**Example 1** A man's salary was sh. 10,000. It has been increased to sh. 12,000. In what ratio has it increased? Ratio = $\frac{New}{Old} = \frac{sh.12000}{Sh.10000} = \frac{12}{10} = \frac{6}{5}$ **= 6.5** **Examples 2** The class has 35 pupils. The number has now increased by 5 pupils. In what ratio has the number increased? Old = 35 pupils New = (35 + 5) pupils = 40 pupils Ratio = $\frac{New}{Old} = \frac{40\,pupils}{35\,pupils} = \frac{40}{35} = \frac{8}{7}$ = **8.7**	• Guided discussion • Inquiry • Brain storming	• Finding the ratio of increase	• Critical thinking • Effective communication	• Chalkboard illustration	• MK Primary mTC book 6 page 131
3	**4**	Numeracy	Fractions	Decreasing quantities in a given ration	The learner Decreases quantities in a given ratio correctly	The learner; Reads, spells, pronounces and uses the words decrease, reduce, ratio	**Example 1** Decrease 40o in a ratio of 3:4 New : Old 3 : 4 ? : 400 1 part = $\frac{\cancel{400}^{100}}{4_{1}}$ 3 parts = $\frac{\cancel{400}^{100}}{\cancel{4}_{1}}$ x 3	• Whole class discussion • Guided discovery	• Decreasing quantities in a given ratio	• Effective communication • Problem solving	• Charts	• MK Primary MTC book 6 page 132

							3 parts = 100 x 3 3 parts = 300 **OR** $\frac{3}{4}$ of 400 $\frac{3}{4}$ x 400 3 x 100 **300 answer** 4 parts = 400 1 part = $\frac{\overset{100}{\cancel{400}}}{\underset{1}{\cancel{4}}}$ 1 part = 100 3 parts = 3 x 100 Therefore 3 parts = 300 answer					
3	**5**	Numeracy	Fractions	Finding the ratio of decrease	The learner; Finds the ratio of decrease	The learner; Reads, spells, pronounces and use the vocabulary words -ratio -decrease -reduce	**Example 1** The number of pupils in the class has decreased from 40 to 35. In what ratio has the number decreased? New salary = (500,000 – 100,000) = 400,000 Old salary = 500,000 Ration $\frac{New}{Old}$ Ratio = $\frac{\cancel{400,000}}{5\cancel{00,000}}$ Ratio = $\frac{4}{5}$ **Ratio = 4:5**	• Brain storming • Guided discovery	• Finding the ratio of decrease	• Creative thinking • Effective communication	•	• MK Primary MTC book 6 page 133

3	**6**	Numeracy	Fractions	Sharing quantities using ratios	The learner; Shares quantities using ratio	The learner; Reads, Spells, pronounces and uses the words -share -ratio -divide	**Examples 1** Share sh. 120 in a ratio of 1:4 Total ratio = 1 + 4 = 5 1st share = $\frac{1}{5}$ x sh. 120 = 24 2ns share = $\frac{1}{5}$ x sh 120 = 4 x sh. 24 = **sh.96** **Example 2** In a village council meeting there were 280 people. The ratio of children to women to men was 2:3:5 respectively. a) How many children were in the meeting Total ratio = 2 + 3 + 5 = 10 Children = $\frac{2}{10}$ x 280 = 2 x 20 = **56 children** b) How many more men than women were there? 5 – 3 = 2 $\frac{2}{10}$ x 280 = 2 x 28 = **56 more men.** **OR** Men: $\frac{5}{10}$ x 280 =140 Women: $\frac{3}{10}$ x 280 =84 More men: 140 - 84 = 56	• Brain storming • Guided discovery	• Sharing quantities using ratios	• Critical thinking • Effective communication	• Money , chalkboard illustration and charts	• MK primary MTC book 6 page 134 – 135 • Fountain MTC book 6 page 80 – 81

3	7	Numeracy	Fractions	Finding the number shared in a given ratio	The learner; Finds the number shared in a given ratio	The learner; Reads, spells, pronounces and uses the words -ratio -share -divide	**Example 1** The ratio of male to female in a club is 2:3. If there are 20 males, how many people are in the club? Total ratio = (2 + 3) = 5 Let the total number be x $\frac{2}{5}$ of x = 20 $\cancel{5} \times \frac{2x}{\cancel{5}} = 20 \times 5 \frac{2}{5} \times \mathbf{x} = 20$ 2x = 100 $\frac{2x}{2} = \frac{100}{2}$ **x = 50 people** **Example 2** The ratio of green to yellow fruits in a basket is 3:4. If there are 8 more yellow fruits than green, how many fruits are in the basket? Total ratio = (3 + 4) = 7 Let the total number of fruits be P 4 – 3 = 1 $\frac{1}{7}$ of P = 8 $\frac{p}{7} = 8$ $\cancel{7} \times \frac{p}{\cancel{7}} = = 8 \times 7$ P = 56 **The basket has 56 fruits**	• Guided discovery • Problem solving • Guided discussion	• Finding the number shared	• Problem solving • Creative thinking	•	• MK Primary MTC book 6 page 136

4	**1**	Numeracy	Fractions	Direct proportion (ratio, rates)	The learner; Applies the idea of direct proportion in ratios and rates	The learner; Reads, spells, pronounces and uses the words -direct -proportion -rates -ratio	**Example1** 4 pens cost sh 2,000. What is the cost of 7 such pens? 4 pens = $\frac{200}{4}$ 7 pens = $\frac{200}{4}$ x 7 **= 3500** **Example 2** One book costs sh. 1500. Find the cost of 13 similar books 1 book = 1500 13 books = (13 x 1500) 13 books = 19,500 1500 x 13 4500 + 1500 **19500**	• Guided discovery • Group work • Brain storming	• Multiplying members • Dividing numbers	• Critical thinking • Problem solving	•	• MK MTC book 6 page 137 – 138
4	**2**	Numeracy	Fractions	Inverse (Indirect) proportion	The learner Applies inverse proportion to salve problems	The learner; Reads, spells and uses the vocabulary -inverse -proportion	**Example 1** 8 men can do a piece of work in 6 days. How long will 4 men take to do the same piece of work? 3 men = 6 days 1 man = (8 x 16) days 2 4 men = $\frac{8x6}{4}$ days 1 **4 men = 2 x 16** **= 32 days** **Example 2** 20 people can dig a piece of land in 5 days. How many more people are needed to do the same piece of work in only 2 days? 5 days = 20 people 1 day = (5 x 20) people 56	• Whole class discussion • Guided discovery	• Dividing numbers • Multiplying numbers	• Effective communication • Problem solving • Critical thinking	• Charts	• MK primary MTC book 6 page 139 - 140

							2 days = $\frac{\cancel{100}}{\cancel{2}_{1}}$ people 20 days = 50 people Difference (50 – 20) people = **30 peoples**					
4	**3**	Numeracy	Fractions	Expressing percentage as fractions	The learner Describes percentage Converts percentage to fractions	The learner; Reads, spells and uses the vocabulary words –percentage -fractions	**Percentage** means every hundred (symbol = %) **Example 1** Write 25% as a fraction to its lowest term $25\% = \frac{\cancel{25}^{1}}{\cancel{100}_{4}} = \frac{1}{4}$ **Example 2** Change $33\frac{1}{3}$ % as a fraction $33\frac{1}{3}\% = \frac{33\frac{1}{3}}{100} = \frac{100}{\frac{3}{100}} = \frac{100}{3} \div \frac{100}{1}(\frac{100}{3} \times \frac{1}{100}) = \frac{1}{3}$	• Discussion • Inquiry • Guided discovery	• Converting percentage to fractions	• Problem solving • Effective communication	• Chalkboard illustration	• A new MK primary MTC book 6 page 143
4	**4**	Numeracy	Fractions	Changing fractions to percentages	The learner; Converts fractions to percentages	the learner; Reads, spells, pronounces the key words -percentage	**Example 1** Convert $\frac{4}{5}$ as a percentage $\frac{4}{5}$ of $100\% = \frac{4}{\cancel{5}_{1}} \times \cancel{100\%}^{20} = (4 \times 20)\% = 80\%$ **Example 2** Express $\frac{2}{3}$ as a percentage $\frac{2}{3} \times 100\% = \frac{200}{3}\% = 66\frac{2}{3}\%$	• Guided discovery • Discussion • Brain storming	• Changing fractions to percentages	• Problem solving • Critical thinking • Effective communication	• Chalkboard illustration	• MK primary MTC book 6 page 144

4	**5**	Numeracy	Fractions	Changing decimals to percentages	The learner; Coverts decimals to percentage to decimals	The learner; Reads, spells and uses the vocabulary decimal fraction point	**Example 1** Change 0.6 as a percentage 0.6 of 100% $\frac{6}{10}$ x 100% = (6 x 10)% =60% Or = 1 $\frac{4}{10}$ = 1 $\frac{2}{5}$ % 0.04 $\frac{14}{1000}$ x 100% = $\frac{14}{14}$ % = 1.4% **Example 2** Convert 2.8 as a percentage $\frac{28}{10}$ x 100% = (28 x 10)% = 280%	• Guided discovery • Discussion • Brain storming	• Changing fractions to percentages	• Problem solving • Critical thinking • Effective communication	•	• MK Primary MTC book 6 page 144
4	**6**	Numeracy	Fractions	Changing percentages to decimals	The learner; changes percentages to decimals	The learner; Reads and uses the vocabulary -decimals -percentage -point	**Example 1** Express 20% as a decimal 20% = $\frac{20}{100}$ = $\frac{12}{10}$ = 0.2 **Example 2** Convert 1.5 % as a decimal 1.5% = $\frac{15}{10} \div \frac{100}{1}$ = $\frac{15}{10}$ x $\frac{1}{100}$ = $\frac{15}{1000}$ = 0.015 **Example 3** Change 12 ½ % as a decimal 12 ½ % $\frac{25}{2} \div \frac{100}{1}$ x $\frac{1}{100}$ = $\frac{25}{200}$ = $\frac{25}{2}$ x $\frac{1}{100}$ $\frac{25x5}{200x5}$ = $\frac{125}{1000}$ = $\frac{1}{8}$ **= 0. 125**	• Guided discovery • Discussion • Brain storming	• Changing percentage to decimal	• Critical thinking • Effective communication	• Chalkboard illustration	• MK primary book 6 page 145

							0. 125 8 ⟌ 1.000 0x 8 = 0 1 0 1x 8 = 8 20 2x8 =16 40 =0.125					
4	7	Numeracy	Fractions	Expressing ratios as percentages	The learner Identifies the ratio Expresses the ratio to percentage	The learner Reads, spells , pronounces the key words -ratio -percentage	**Example 1** Express 2:3 as a percentage 2:3 = $\frac{2}{3}$ x 100% = $\frac{200}{3}$ % = 66$\frac{2}{3}$ % **Example 2** Convert 7:8 to percentage 7:8 = $\frac{7}{8}$ of 100% = $\frac{7}{\cancel{8}_{2}}$ x $\cancel{100}^{25}$% = $\frac{175}{2}$ % = 87$\frac{1}{2}$ % or 87.5%	• Guided discovery • Brain storming	• Expressing ratios as percentages	• Critical thinking • Effective communication	•	• MK primary MTC book 6 page 146
5	1	Numeracy	Fractions	Changing percentages to ratios	The learner; Identifies the percentages Changes the percentage to ratios	The learner; Reads and uses the correctly given words -ratio -percentage	**Example 1** Express 60% as a ratio 60% = $\frac{60}{100}$ = $\frac{\cancel{60}}{\cancel{100}}$ = $\frac{\cancel{6}^{3}}{\cancel{10}_{5}}$ = $\frac{3}{5}$ = 3:5 **Example 2** Change 37 $\frac{1}{2}$ % as a ratio 37$\frac{1}{2}$ % = $\frac{75}{2}$ ÷ $\frac{100}{1}$ = $\frac{\cancel{75}^{3}}{2}$ x $\frac{1}{\cancel{100}_{4}}$ = $\frac{3x1}{2x4}$ = $\frac{3}{8}$ = 3:8	• Inquiry • Brain storming • Guided discussion	• Expressing ratios as percentages • Expressing percentages as ratios	• Problem solving • Effective communication	• Charts	• MK primary MTC book 6 page 146

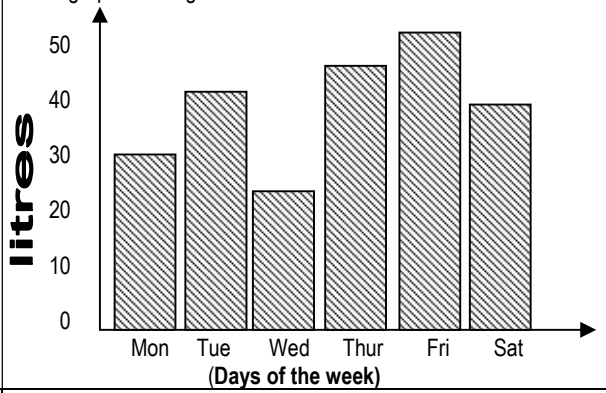
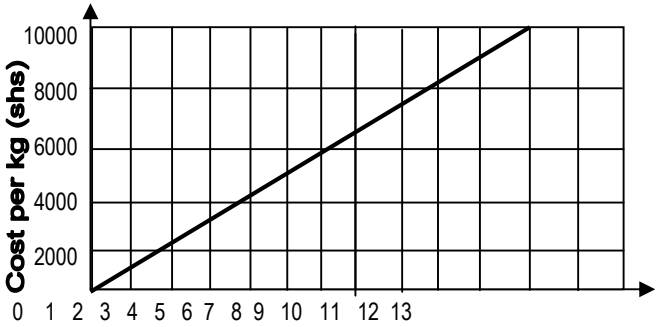
5	**2**	Numeracy	Fractions	Finding parts of percentage	The learner; Identifies the percentage points Finds the parts of percentage	The learner Reads, spells, pronounces and uses the words -percentage	**Example 1** If 80% of the class are boys, what percentage are girls? Boys = 80% Girls = 100% - 80% Girls = 20% **Example 2** Musisi covered 30% of his journey by car and 55% by Bus. What percentage of the journey was left? Entire journey = 100% Journey covered = (30% + 55%) = 85% Percentage left = 100% - 85% = 15%	• Brain storming • Inquiry • Whole class discussion	• Finding parts of a percentage	• Problem solving • Effective communication	• Chalkboard illustration	• MK Primary MTC book 6 page 147
5	**3**	Numeracy	Fractions	Comparing quantities using percentage	The learner; Compares quantities using percentage	The learner; Reads and uses the vocabulary quantities, percentage compare	**Example 1** There are 20% more boys than girls in the class (a) What is the percentage of boys? Let the girl's percentage be x. G | B | T X | X+20% | 100% (X) + (X +20%) = 100% x+ x + 20% = 100 2x + 20% - 20% = 100% - 20% 2x = 80 $\frac{2x}{2} = \frac{80}{2}\%$ = 40% Boys = (x + 20%) =(40% + 20%) = 60% b) Find the girls' percentage. (100% - 60%) = 40%	• Guided discovery • Brain storming • Guided discussion	• Comparing quantities using percentages	• Problem solving • Creative thinking • Effective communication	•	• MK Primary MTC book 6 page 148
5	**4**	Numeracy	Fractions	Expressing quantities as percentages	The learner; expresses quantities as percentages	The learner; reads and uses the vocabulary words -quantities -percentage	**Example** Henry had 40 goats. He sold 15 of them. What percentage of the goats was sold? $\frac{15}{40} \times 100\% = \frac{75}{2}\% = 37\frac{1}{2}\%$	• Guided discovery • Discussion • Brain	• Expressing quantities as a percentage	• Critical thinking • Effective communicatio	• Chalkboard illustration	• MK primary MTC book 6 page 149 – 150

							Not sold? (40 – 15) = 25 $\frac{25}{40}$ x 100% = $\frac{125}{2}$ % = $62\frac{1}{2}$ % **Or** 100 – 37 ½ **62 ½ %**					
5	**5**	Numeracy	Fractions	Finding quantities equivalent to percentages	The learner; Finds quantities Equivalent to percentage	The learner; Reads and uses the words -quantities -percentage	**Example 1** What is 20% of 2500? 20% of 2500 = $\frac{20}{100}$ x 2 = 500 = 20 x 25 = 500 **Example 2** What is 25% of 3 dozens of books? 1 dozen = 12 books 3 dozens = (3 x 12) books = 36 books = $\frac{\cancel{25}^{1}}{\cancel{100}_{4}}$ x 9 books = 9 books	• Inquiry • Whole class discussion • Brain storming	• Finding quantities equivalent to percentage	• Effective communication • Critical thinking • Problem solving	•	• MK Primary MTC book 6 page 151
5	**6**	Numeracy	Fractions	Sharing quantities using percentages	The learner; Finds quantities Equivalent to percentage	The learner; Reads and uses the words -quantities -percentage	**Example 1** In a school of 400 pupils, 30% are boys a) How many boys are in the school? No. of boys = 30% of 400 = $\frac{30}{100}$ x ~~400~~ = 30 x 4 = 120 boys b) What percentage are girls? (100% - 30%) = 70% c) How many girls are in this school? (400 – 120) = 280 girls.	• Guided discovery • Rain storming	• Sharing quantities using percentage	• Effective communication • Problem solving	•	• MK Primary MTC book 6 page 152

5	7	Numeracy	Fractions	Forming and solving equation involving percentages	The learner; Forms equation Solves equation	The learner Reads, spells and used the correct vocabulary words Percentage	**Example 1** If 10% of a number is 40 what is the number? Let the number be K 10% of K = 40 $\frac{10}{10\cancel{0}}$ x K = 40 = $10\cancel{0}$ x $\frac{1\cancel{00}}{1\cancel{00}}$ = 40 x $10\cancel{0}$ = $\frac{1\cancel{0}}{1\cancel{0}}$ k = $\frac{40x10\cancel{0}}{1\cancel{0}}$ K =400 **Example 2** 20% of the pupils in a school are girls. There are 35 girls in the school. How many pupils are there in the school? Let the total number of pupils be x 20% of x = 35 1 $\frac{\cancel{20}}{\cancel{100}}$ x x = 35 = $\frac{1}{\cancel{5}}$ x $\frac{x}{\cancel{5}}$ = 35 x 5 = x = **175 pupils** 5	• Guided discovery • Whole class discussion	• Find the unknown number • Forming equations • Solving equations	• Critical thinking • Effective communication	•	• MK primary MTC book 6 page 153
6	1	Numeracy	Fractions	Increasing quantities in percentage	The learner Increases quantities by percentage	The learner; Reads and uses the words Increase quantities percentage	**Example 1** Increase 200 by 25% (100% + 25%) of 200 125% of 200 $\frac{125}{400}$ x 200 = 250 **Example 2** Increase sh. 4800 by 10% and then by 20% 100% + 10% = 110% $\frac{110}{1\cancel{00}}$ x sh. 4800 = 110 x sh. 48 = sh. 5280	• Brain storming • Guided discovery	• Increasing quantities by percentage	• Effective communication • Problem solving	•	• A new MK MTC book 6 page 154 – 155

							(100% + 20%) = 120% 120% of shs = 5280 = $\frac{120}{100}$ x sh. 5280 = sh. 6336 **Method 2** New % = 100 % + 10% = 110% New% = 100% + 20% = 120% New amount 110% of 120% of sh. 4800 $\frac{11\cancel{0}}{1\cancel{00}} \times \frac{12\cancel{0}}{1\cancel{00}}$ = shs. 4800 11x12 x sh. 48 132 x sh.48 Sh. 6336					
6	**2**	Numeracy	Fractions	Decreasing quantities by percentage	The learner; Decreases quantities by percentage	The learner Uses the vocabulary words Reduce decrease quantities	**Example 1** Decrease 300 cows by 30% (100% - 30%) -= 70% $\frac{70}{\cancel{100}} \times \cancel{300}$cows = (70 x3) cows = 210cows **Example 2** A man's salary is \$800. How much will his salary be if it's cut by $12\frac{1}{2}$ %? $(\frac{25}{2} \div \frac{100}{1})$ = $(\frac{\cancel{25}}{2} \times \frac{1}{\cancel{100}_{4}}{}^{1})$ = $(\frac{8}{8} - \frac{1}{8})$ of \$ 800 $= \frac{1}{8}$ 100 $\frac{7}{\cancel{8}_{1}} \times \cancel{\$\ 800}$ = \$ 700	• Discussion • Guided discovery • Brain storming	• Decreasing quantity percentage	• Effective thinking • Critical thinking	•	• MK MTC book 6 page 156 – 157

6	**3**	Numeracy	Fractions	Finding percentage profit or loss	The learner; Defines the terms Solves problems involving loss and profit	The learner; Reads, spells and uses the key words -profit, loss	**Example 1** A trader bought a dress at sh.1600 and sold it at sh.2000 a) Find his profit Profit = sp – cp profit = 2000 – 1600 profit – 400 Percentage profit = $\frac{profit}{C.P}$ x 100% 25 $\frac{\cancel{400}}{\cancel{1600}}$ x $\cancel{100}$ = 25% 1 **Example 2** Mulema bought a goat at sh. 3500 and sold it at sh. 32,000 a) Find the loss Loss = C. P 5P Loss = CP – SP Loss (Sh. 3500 = sh 3200) Loss = sh. 3000 b) Calculate the Mulema's percentage Loss = % loss = Loss x 100% C.P Sh. 3000 x 100% sh. 35000 60 % 7 **$8\frac{4}{7}$ %**	• Discussion • Guided discovery	• Defining profit or loss	• Critical thinking • Effective communication • Problem solving	• Chalkboard illustration	• MK Primary MTC book 6 page 158
6	**4**	Numeracy	Fractions	Finding simple interest	The learner; Describes various terms Solves problems involving interest States the formulae for finding interest	The learner; Read, spells and writes the words Interest, rate, time, principal percentage	**Example 1** A farmer deposited shs. 10,000 in a bank that offers an interest rate of 10% per year. How much will the farmer get in 2 ½ years? SI = P x R x T = Shs. 120,000 x $\frac{\cancel{10}}{\cancel{100}}$ x $2\frac{1}{2}$ 6000 = shs. $\cancel{120,000}$ x $\frac{\cancel{10}}{\cancel{100}}$ x $\frac{5}{2}$ = Sh. (6000x 5) = **Sh. 30,000**	• Inquiry • Brain storming	• Finding simple interest	• Problem solving • Effective communication • creative thinking	•	• MK primary MTC book 6 page 159-160

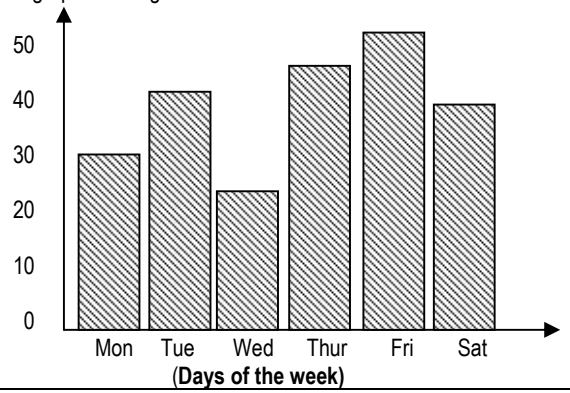
6	**5**	Interpretation of graphs and data	Data handling	Drawing bar graphs	The learner; Presents and interprets tables Draws bar graphs correctly	The learner Reads, spells and uses the words scale graph data	**Example** Mbabazi sold 30 litres of milk on Monday, 40% on Tuesday, 25% on Wednesday, 45 on Thursday, 50% on Friday and 35% on Saturday. Tabulate to simplify the information **Days** | **MON** | **TUE** | **WED** | **THUR** | **FRI** | **SAT** **litres** | 30 | 40 | 25 | 45 | 50 | 35 A bar graph showing No. of litres of milk sold in a week.  	• Guided discovery • Discussion • Group work	• Drawing bar graphs • Tabulating data	• Critical thinking • Problem solving	• Charts	• MK Primary MTC book 6 page 164 – 167
6	**6**	Interpretation of graphs and data	Data handling	Line graphs	The learner Interprets the data using a line graph	The learner; Reads and uses the vocabulary words graph line	**Example** The graph below shows the cost of ground nuts in kg. Study the graph and answer questions that follow.  a) What is the cost of 1kg of G nuts? b) What is the cost of 7kg of G. nuts? c) How many Kg can I buy with sh. 9000? d) How much would 1 pay if I bought 3kg?	• Guided discovery • Discussion • Brain storming	• Calculating simple statistics	• Critical thinking • Effective communication • Problem solving	• Chalkboard illustration	• MK primary MTC book 6 page 170 - 172

6	7	Interpretation of graphs and data	Data handling	Simple statistic (mode, media, range, mean)	The learner; works out simple statistics	The learner Reads, spells and pronounces key words Mode, Median Range Mean Frequency	**Example** Given a list of numbers 2, 4, 6, 7, 8, 3 a) Find the range R = H – L R = 8 – 2 R = 6 b) Work out the mean of the numbers Mean = sum of items / No. of items $\frac{2+4+6+7+8+3}{6}$ $\frac{30}{6}$ Mean = 5 c) Median = 2, 3, 4, 6, 7, 8, $\frac{4 \_ 6}{2} = \frac{10}{2} = 5$ d) Mode = 2, 4, 6, 7, 8 and 3	• Guided discovery • Discussion • Brain storming	• Calculating simple statistics	• Critical thinking • Effective communication • Problem solving	• Chalkboard illustration	• MK primary MTC book 6 page 170 – 172

7	1	Interpretation of graphs and data	Data handling	Word application on mean / average	The learner; applies the idea of mean to solve problems	The learner; Reads, spells and uses key words Mean Average	**Example 1** The average of 3 numbers is 12. What is the sum of the 3 members Average = sum of items / No. of items 3 x 12 = Sum of items x 3 / 3 36 = sum of items **Therefore sum of the three numbers is 36** **Example 2** The average mark of 4 pupils is 6 and the average mark of 4 other pupils is 8. What is the average mark of all the 8 pupils? Average of 8 = sum of items / number of items = (4x 6) + (4 x8 / 4 + 4 = 24 + 32 = 56 = 7 / 8 8 **Example 3** The average age of 8 workers is 15 years. If 2 workers whose age is. 10 years and 14 years leave the group, what is the average age of the remaining pupils? Average age = (8 x 15) – (10- + 14) / 8 - 2 = 120 – 24 96 = **16years** / 6 6	• Guided discovery • Whole class discussion	• Calculating simple statistics	• Critical thinking • Effective communication • Brain storming	• Chalkboard illustration	• MK primary MTC book 6 page 173 – 174

<table>
<tr>
<td>7</td>
<td>2</td>
<td>Interpretation of graphs and data</td>
<td>Data handling</td>
<td>Interpreting and drawing graphs from tables</td>
<td>The learner;
interprets the data

Draws bar graphs</td>
<td>The learner
Reads and uses the key words
data
information
graph</td>
<td><u>Example</u>
The total below shows John's working hours for a week.

Tabulate to simplify the information
<table>
<tr><td>Days</td><td>MON</td><td>TUE</td><td>WED</td><td>THUR</td><td>FRI</td><td>SAT</td></tr>
<tr><td>Hrs work</td><td>30</td><td>40</td><td>25</td><td>45</td><td>50</td><td>35</td></tr>
</table>
A bar graph showing No. of litres of milk sold in a week.

</td>
<td>Guided discovery
• inquiry
• Brain storming</td>
<td>Drawing bar graphs
• Finding range, mean, median. mode</td>
<td>Critical thinking
• Effective communication</td>
<td>• Chalkboard illustration</td>
<td>• MK Primary MTC book 6 page 175 - 176</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>Interpretation of graphs and data</td>
<td>Data handling</td>
<td>Collecting and organizing data</td>
<td>The learner;
Collects data

Organizes
Tabulates data</td>
<td>The learner;
Uses the key words
Data
Tabulate
Organize</td>
<td><u>Collect and record age of 40 classmates as shown</u>
<table>
<tr><td>10</td><td>11</td><td>12</td><td>11</td><td>12</td><td>12</td><td>11</td><td>10</td><td>12</td><td>11</td></tr>
<tr><td>12</td><td>11</td><td>12</td><td>13</td><td>12</td><td>13</td><td>12</td><td>11</td><td>14</td><td>11</td></tr>
<tr><td>12</td><td>14</td><td>14</td><td>11</td><td>12</td><td>11</td><td>13</td><td>11</td><td>13</td><td>11</td></tr>
<tr><td>12</td><td>11</td><td>12</td><td>11</td><td>15</td><td>12</td><td>11</td><td>14</td><td>11</td><td>12</td></tr>
</table>
<table>
<tr><td>Age</td><td>Tally</td><td>Frequency</td></tr>
<tr><td>10 years</td><td>//</td><td>2</td></tr>
<tr><td>11 years</td><td>~~////~~-~~////~~ ~~///~~/</td><td>15</td></tr>
<tr><td>12 years</td><td>~~////~~ -~~////~~ ////</td><td>14</td></tr>
<tr><td>13 years</td><td>////</td><td>4</td></tr>
<tr><td>14 years</td><td>////</td><td>4</td></tr>
<tr><td>15 years</td><td>1</td><td>1</td></tr>
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Table
<table>
<tr><td>Age in years</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td></tr>
<tr><td>No. of pupils (Freq)</td><td>2</td><td>15</td><td>14</td><td>4</td><td>4</td><td>1</td></tr>
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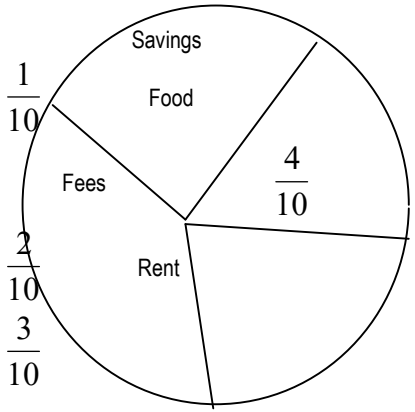
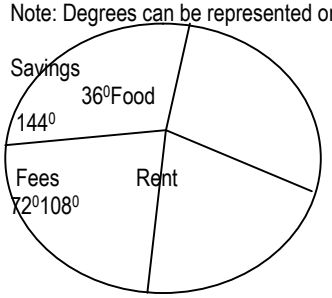
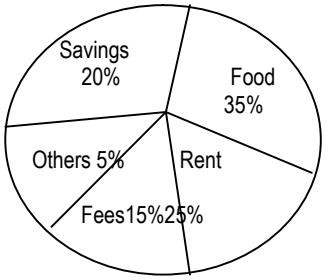
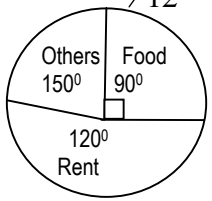
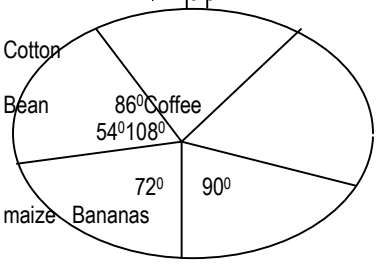
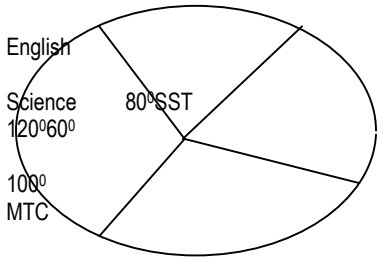
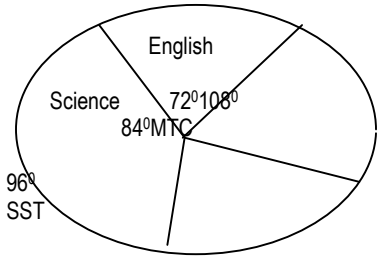
Questions
Find;
i) Modal age
ii) Range
iii) Modal frequency
iv) Median
v) Mean</td>
<td>Discussion
• Guided discovery</td>
<td>• Collecting and organizing data</td>
<td>• Effective communication
• Critical thinking
• Friendship formation</td>
<td>• Charts</td>
<td>• MK Primary MTC book 6 page 177-178</td>
</tr>
</table>

7	**4**	Interpretation of graphs and data	Data handling	Using pie-charts	The learner; Interprets and represent on pie charts	The learners; Reads, spells and uses the words, Pie Chart Chicks	**Example 1** A man spends his monthly salary as follow. Food $\frac{4}{10}$, Rent $\frac{3}{10}$, Fees $\frac{2}{10}$, Saving $\frac{1}{10}$ **Represent on a pie chart** Note: Degrees can be represented on a pie chart  Food = $\frac{4}{10}$ x 360^0 = 144^0 Rent = $\frac{3}{10}$ x 360^0 = 108^0 Savings = $\frac{1}{10}$ x 360^0 = 36^0 Fees = $\frac{2}{10}$ x 360 = 72^0	• Whole discussion • Guided discovery • Inquiry	• Interpreting and drawing pie charts	• Creative thinking • Effective communication	• Chalkboard illustration	• MK Primary MTC book 6 page 179 – 182

							Example 2 The pie chart represents how a man spends sh. 120, 000 in a months. Food $\frac{4}{10}$, Rent $\frac{3}{10}$, Fees $\frac{2}{10}$, Saving $\frac{1}{10}$ **Represent on a pie chart** Note: Degrees can be represented on a pie chart  a) How much does he spend on Rent? $\frac{188^0}{360^0}$ x sh. 12000 = (3 x 12000) = sh. 36,000/= b) What fraction represents fees? Fees = $\frac{72^0}{360^0} = \frac{2}{10} = \frac{1}{5}$ n c) How much more does he spend on food than Rent?					
7	**5**	Interpretation of graphs and data	Data handling	Pie-charts involving percentage	The learner; Represents and interprets data on a pie chart	The learner; Reads and explains information on a pie chart	The teacher's earning is sh. 300,000, spends as shown  a) How much is spent on Rent? b) Which fraction represents Food? c) How much does he spend on others? d) How much more does he spend on Food than Fees?	• Inquiry • Discussion • Guided discovery	• Interpreting data	• Problem solving • Effective communication	• Chalkboard illustration	• MK primary MTC book 6 page 183 – 184

7	**6**	Interpretation of graphs and data	Data handling	Constructing pie-charts from fractions	The learner; constructs accurate pie charts Converts fractions to degrees	The learner ; Reads and uses the words Fractions Construct	**Example** A man spends his money as follow $\frac{1}{4}$ on food, $\frac{1}{3}$ one rent and $\frac{5}{12}$ on others a) Draw a pie-chart using the data Food = $\frac{1}{4}$ x $360^0 = 90^0$ Rent = $\frac{1}{3}$ x $360^0 = 120^0$ Others = $\frac{5}{12}$ x $360^0 = 150^0$  	• Guided discovery • Discussion	• Constructing pie-charts	• Effective communication • Critical thinking	• Chalkboard illustration	• MK primary MTC book 6 page 185 – 186
7	**7**	Interpretation of graphs and data	Data handling	Constructing pie-charts from percentages			**Example** In a village 25% of the farmers grow bananas, 20% grow maize, 15% grow beans, 10% grow cotton and 30% grow coffee. a) Draw a pie chart showing the above information Banana = $\frac{25}{100_1}$ x $360^0 = 90^0$ Maize = $\frac{20}{100_2}$ x $360^0 = 72^0$ Beans = $\frac{15}{100}$ x $360^0 = 54^0$ Cotton = $\frac{10}{100}$ x $360^0 = 36^0$ Coffee = $\frac{30}{100}$ x $360^0 = 108^0$  	• Guided discovery • Inquiry • Discussion	• Changing percentage to degrees • Constructing pie charts	• Effective communication • Critical thinking • Creative thinking	• Chart showing pre charts	• MK Primary MTCD book 6 page 186 – 187

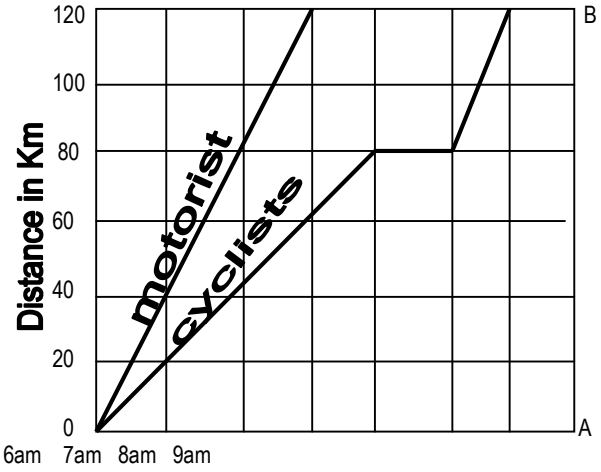
8	**1**	Interpretation of graphs and data	Data handling	Constructing a pie chart using given data	The learner' Draws pie charts Converts data to degrees	The learners Read, spells and used the words data degrees	There are 4 English books, 3 social studies books, 4 mathematics books and 6 science books. use the information and draw a pie chart. Total = (6 + 5 + 3 + 4) = 18 books English = $\frac{4}{10}$ x 360^0 = 80^0 , SST = $\frac{3}{100}$ x 360^0 = 62^0 MTC = $\frac{5}{10}$ x 360^0 = 100^0, Science = $\frac{6}{10}$ x 360^0 = 120^0  	• Guided discovery • Inquiry	• Drawing pie-charts	• Critical thinking • Friendship formation	•	• MK Primary book 6 page 187 – 188
8	**2**	Interpretation of graphs and data	Data handling	Constructing pie- charts using data in tables	The learner; Constructs pie charts	The learner' Reads and uses the key words correctly	The table shows the marks scored by Peter in 4 subjects. Represent Peter's performance on a pie – chart. Subject | Eng | MTC | Sci | SST % mark | 60 | 90 | 70 | 80 Total = (60 + 90 + 70 + 80) = 300 English = $\frac{60}{300}$ x 360^0 = 72^0, SST = $\frac{80}{300}$ x 360^0 = 96^0 MTC = $\frac{90}{300}$ x 360^0 = 108^0 , Science = $\frac{6}{10}$ x 360^0 = 120^0  	• Guided discovery • Discussion • Whole class discussion	• Constructing pie-charts	• Effective communication • Critical thinking	•	• MK Primary MTC book 6 page 189

8	**3**	Measurements	Money	Buying and selling (shopping bills)	The learner; Identifies the money denomination Completes bills	The learner; Reads, spells, pronounces and uses the words bills quality unit cost amount	**Example** Study the table below and complete Item | Quantity | Unit cost | Total cost Sugar | 4kg | sh.1200 | sh.4,800 Soap | 2bars | sh. 700 | sh. 1,400 Oil | 3 litres | sh. 1,500 | sh., 4500 **Total expenditure** | **sh. 10, 700** **Sugar** A = Q x U = 4 x 1,200 = Sh. 4 800 **Soap** U = A/Q = $1400/2$ = sh. 700 **Oil** Q = A/U = $4500/1500$ = 3 **Expenditure** Sh. 4 8 0 0 Sh. 1 4 0 0 + Sh 4 5 0 0 Sh. 10 7 0 0	• Guided discovery • Whole class discussion • Inquiry	• Finding the missing	• Critical thinking • Problem solving	• Real money	• MK Primary MTC book 6 page 214 – 217
8	**4**	Measurements	Money	Uganda currency	The learner; Identifies the number correctly Counts and includes the first note	The learner reads and uses the key words notes currency bank	**Example** If bank notes are numbered consecutively from $4/10$ 003782 to A/P 003881. How many notes are there? A/P = 003881 A/P = 003782 99 + 1 100 notes **Example 2** Amos has bank notes numbered from AT00 4300 to AT 004399 a) How many bank notes does he have? AT004399 -AT004300 99+1 = 100 notes b) If each note is worth sh. 10,000 in value, how much money does he have? 1 note = sh. 10,000 100 notes = 100 x sh.10,000 =sh. 1,000,000	• Guided discovery • Discussion • Brain storming	• Finding the number of notes • Finding amount	• Effective communication • Problem solving	• Real money	• MK Primary MTC book 6 page 218-219

8	**5**	Measurements	Money	Exchange rates	The learner' Identifies the currency for each country Converts the given currency to another	the learner; reads, spells and pronounces the key words Currency Rates	**Study the exchange rates below** Currency | Buying | Selling 1 US $ | 2400 | 2450 1 pound sterling £ | 3500 | 3550 1 Kenya shilling (Ksh) | 29 | 30 1TZ (TS sh) | 2 | 3 1 Rwanda Fran*RF) | 3.5 | 4 **Examples** Convert 245,000 Ug.sh to Us $ Us and 1 = UG.Sh 2450 Ug.Sh,2450 = US $1 Ug. Sh.1 = $\frac{1}{2450}$ Ug. Sh.245000 = $\frac{1}{2450}$ x 245000 = US$ 100 b) Bayiga has to send her son's tuition to Britain. She has sh. 2307,500 to exchange . Find the amount of pound sterling she will get? Ug. Sh. 3359 = £.1 Ug. Sh. 1 = £ $\frac{1}{3550}$ Ug. Sh. 2,307,500 = £ . $\frac{1}{3550}$ x 2307500 = £. 650 c)Change Ksh. 4000 to Ug. Shillings Ksh.1 = Ug. 29 Ksh 4000 = Ug.sh. (29 x 4000) Ug sh. – 116,000	• Guided discovery • Brain storming •	• Converting the given currencies •	• Critical thinking • Effective communication •	• Real money , chalk board illustration •	• MK Primary MTC book 6 page 107 – 111 •

8	**6**	Measurements	Money	Finding distance when given sped and time	The learner Identifies the different measures Finds distance	The learner; Reads, spells and writes the words	**Example** John took 4 hrs to cover a distance at a speed of 30kmk/hr. what distance did he cover? D = S x T D = 30km /hr x 4hrs D = $\frac{30km}{1hrs}$ x 4 hrs D = 120 Km Find the distance covered at a speed of 120km /hr in 45 minutes D = S x T D = $\frac{120}{1hr}$ =- $\frac{45}{60}$ hr D = 2 x 45 D = 90km	• Brain storming • Inquiry • Discussion	• Finding distance	• Critical thinking • Effective communication	• Chalkboard illustration	• MK primary MTC book 6 page 112
8	**7**	Measurements	Money	Calculating speed	The learner Identifies distance and time Finds speed	The learner; reads, spells and uses the key words speed distance time	**Example** Nakato took 2 hours to cover a distance of 36km on his bicycle. At what speed was she riding? S = $\frac{D}{T}$ = S $\frac{36km}{2hr}$ = S = 18km/hr	• Guided discovery • Brain storming	• Finding speed	• Effective communication • Problem solving	• Chalk board	• MK primary MTC book 6 page 113
9	**1**	Measurements	Money	Finding time	The learner; Identifies distance and speed Finds time correctly	The learner Reads, spells, pronounces and uses the vocabulary words time speed distance	If a bus moves at 30km/hr and covers a distance of 240km, how long does it take to cover the journey? Time = $\frac{D}{S}$ = $\frac{240km}{30km/hr}$ = $\frac{240}{30}$ hrs - **Time = 8 hours**	• Brain storming • Inquiry • Whole class discussion	• Finding time	• Critical thinking • Problem solving	•	• MK primary MTC book 6 page 114

9	**2**	Measurements	Money	Changing m/sec to km/hr	The learner; Identifies distance and speed Finds time correctly	The learner Reads, spells, pronounces and uses the vocabulary words time speed distance	**Example** Change 5m/sec to km/hr 1000m = 1 km 1m = $\frac{1}{1000}$ km = 5m = $\frac{1}{1000}$ x 5km = $\frac{5}{1000}$ km = 3600sec=1hr Speed = 1m = $\frac{D}{T}$ = ($\frac{5}{1000} \div \frac{1}{3600}$) km/hr = ($\frac{5}{1000}$ x $\frac{3600}{1}$)km/hr = 18km/hr	• Discussion • Guided discovery	• Effective communication • Problem solving	• Clock face	•	• MK Primary MTC book 6 page 115
9	**3**	Measurements	Money	Expressing km/hr to m/sec	The learner States number of metres in 1km Tells how many seconds are in 1 hour	The learner Reads and uses the key words	**Examples** Express 72km/hr as m/sec 1km = 1000m 1 hr = 3600 sec 72km/hr = 72 x 1000m = (7x x 10) m/sec 1 x 3600sec36 **= 20m/sec =20m/sec** A bus covered a distance of 180km in 2 hours. Express its speed in m/sec. 1km = 1000m 1hr = 3600sec 9km/hr = 90 x 1000m 1 x 3600sec **= (5 x 5) m/sec** **= 25m/sec** S = D T S =180 2hr = 90km/hr	• Guided discovery • Inquiry	•	• Creative thinking • Effective communication • Problem solving	• Clock face	• MK primary MTC book1 6 page 116

9	**4**	Measurements	Money	Finding average speed	The learner; Finds the average speed	The learner; Read and interprets questions (statements properly)	**Example** A car takes 3 hours to cover a certain journey at 60km/hr but it takes only 2 hours to return through the same distance a) Find the total time taken to cover the whole journey. Total time = 3hrs + 2hrs Total time = 5 hours b) Calculate the total distance covered 1st journey = D = S x T / D = 60km /hr x 3hr = 180km 2nd journey = D = S x T = D = 180km (same distance) c) Calculate the car's average speed Average speed = $\frac{\text{T.D.C}}{\text{T.T.T}}$ = 180km + 180k 3hrs + 2hrs = $\frac{\cancel{360}\text{km}}{\cancel{5}\text{hrs}}$ = 72km/hr	• Discussion • Guided discovery	• Calculating average speed	• Problem solving • Critical thinking	•	• MK primary MTC book 6 page 239
9	**5**	Measurements	Money	Interpreting distance, time and speed on a travel graph	The learner Interprets travel graphs correctly	The learner; reads and uses the key words distance time speed travel	**The graph shows two people travelled from town A to town B using different means**  **Tim in hours** a) At what time did the two people start their journey? b) At what speed was the cyclist moving? c) how long did the cyclist rest? d) calculate the cyclists' average speed for the whole of his journey.	• Guided discovery • Brain storming	• Interpreting travel graphs	• Problem solving • Effective communication	•	• MK book 6 page 118 – 120