**PRIMARY FOUR LESSON NOTES TERM TWO**

**LESSON I**

**Theme 2:** Numeracy

**Topic 4:** Fractions

Definition of a fraction

A fraction is a part of a whole.

**TYPES OF FRACTION**

Proper fractions

Common fractions or vulgar fractions e.g ¾, 1/7, 5/9

Improper fraction e.g 17/4, 28/7, 52/3

Decimals e.g 0.3, 5.6, 178.94

Mixed numbers e.g 21/3, 184/7

Equivalent fractions 2/3, 4/6, 7/9

**Showing parts of fractions by drawing and shading**

**Example I**

Show 3/5 in the figure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

(b) Name the unshaded fraction: 2/5

**Example II**

Draw a figure and show 4/7

**Activity**

1. (a) Name the shaded fraction

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |

(b) Name the un shaded fraction

(i) What fraction is un shaded?

(ii) Write the unshaded fraction in words.

(c) Name the shaded fraction.

(ii) What fraction is un shaded

(d)

(i) What fraction is shaded?

(ii) Name the un shaded fraction.

(iii) Write the shaded fraction in words.

**Equivalent fractions**

Finding the next equivalent fractions

**Examples**

1/3, \_\_\_, \_\_\_

1 x 2 2 1 x 3 = 3

3 2 6 3 3 9

1 2 3

3 6 9

(b) Find next three equivalent fractions to 3/5, \_\_\_, \_\_\_\_, \_\_\_\_

3 X 2 = 6 3 x 3 = 9 3 x 4 = 12

5 2 10 5 x 3 15 5 x 4 20

3 12

5 10, 15, 20

**Shading the equivalent fractions**

Examples

Shade ½ of the figure.

|  |  |
| --- | --- |
|  |  |
|  |  |

½ x 4

1 x 2

= 2 parts

**Activity**

1. (a) Find the next two equivalent fractions to 2/3, \_\_\_, \_\_\_

(b) Find the next three equivalent fractions to ¾, \_\_\_, \_\_\_, \_\_\_

(c) Find the next two equivalent fractions to 5/7, \_\_\_, \_\_\_

(d) Find the next three equivalent fractions to 5/10, \_\_\_, \_\_\_,\_\_\_

2. Shade 2/3 of the figure.

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |

(b) Shade 3/5 of the figure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Shade ¾ of the figure.

Lesson 3

Finding the equivalent fractions in the box.

k

1

3 6

6 x 1 = k x 6

3 6

2 x 1 = k x 1

2 = k

**.. k = 2**

Example II

Find the missing number in the box.

2 b

3 6

6 x 2 = b x 6

3 6

2 x 2 = b x 1

4 b

.. b = 4

**Activity**

**Find the missing number in the box**

1. (a) 1 (b) 3

2 10 10 30

(c) 2 (d) 2

3 15 9 18

(d) 4 (f) 5

5 20 10 40

**Changing mixed numbers to improper fractions**

12/5 = 1 +2

5 + 2 x5

5

= 7/2

**Example II**

4 3 = 4 +3

9 x9

36 + 3

9

39

9

**Activity**

Change the following mixed numbers to improper fractions.

1. (a) 23/4 (b) 32/3 (c) 45/6

(d) 35/12 (e) 32/7 (f) 27/10

(g) 10 4/5 (h) 131/2

**Changing improper fractions to mixed numbers**

**Example I** 1 r 1

6 5 6

5 1 x 5 = -5

1

= 11/5

**Example II**  9 r 1

28 3 28

3 9 X 3 = - 27

1

= 91/3

**Activity**

Express the following improper fractions as mixed numbers.

1. 10 (b) 17 (c) 35 (d) 37

4 5 6 7

(e) 54 (f) 63

8 10

Reducing fractions to their lowest terms.

Example I

5 =÷ 5 ÷3 = 1

10 10÷ 5 2

**Example II**

12 12 ÷ 2 = 6

16 16÷ 2 8

6 = 6÷ 2 = 3

8 8÷ 2 4

**Example III**

Express 0.8 as a vulgar fraction to its lowest term.

0.8 = 0 1th = eight tenths = 8

0 8 10

8 = 8÷2 = 4

10 10÷ 2 5

**Activity**

**Reduce the following fractions to their lowest terms.**

1. 6/9 (b) 8/12 (c) 15/21

(d) 0.6 (e) 12/36 (f) 0.3

(g) 24/48 (h) o.4

Addition and subtraction of fractions with the same denominator

**Example I**

Add: 1 + 2 1+2

5 5 5

= 2/5

**Example II**

1 – 5/9

Original fraction = 9/9

9 - 5 = 9 – 5

9 9 9

4/9

**Example III**

Kato had an orange and divided it into 8 equal parts. He ate 2/8 of it in the morning and 3/8 of it in the evening.

1. What fraction did he eat altogether?

2 + 3 = 2+3

8 8 8

= 5

8

1. What fraction of the orange remained?

Original fraction = 8/8

8 - 8 = 8-5

8 8 8

= 3/8

**Activity**

1. Find the sum of 3/5 + 2/5
2. Simplify: 1 – 2/3
3. Mukasa used ¾ of his salary and saved the rest. What fraction of his salary did he save?
4. Mulokole divided a watermelon into 9 equal parts. If he ate 3 parts of it in the morning and 4 parts of it in the evening.

(i) What fraction of the watermelon did he eat altogether?

(ii) How many pieces did he remain with?

1. Subtract 6/13 from 11/13

**Addition of mixed numbers with the same denominators**

**Example I**

11/5 + 22/5

1 +1 + 2 +2

x5 x5

6 + 12 = 18

5 5

3 r 3

5 18

3 x 5 = 15

3 = 33/5

**Example II**

2 3/7 + 31/7

17 + 22 = 39

7 7

5 r 4

7 39

5 X 7 = 35

4

= 54/7

**Example III**

A man had 31/8kg of beef and bought 22/7kg of beef. Find the total kg of beef

3 1/8 + 22/8

25 + 18 = 43

8 8

5 r 3

8 43

5 x 8 = 40

3

= 53/8 kg of beef

**Activity**

Add the following mixed numbers.

1. 11/3 + 41/3 (b) 21/7 + 15/7

(c) 22/3 + 11/3 (d) 31/3 + 21/3

(e) 61/7 + 52/7 (f) 91/4 + 33/4

**Subtraction of mixed numbers with the same denominator**

**Example I**

21/2 – 11/2

5 – 3 2

2 2

= 1

**Example II**

75/11 – 41/11 = 82 – 45

11

37/11

3 r 4

11 37

3X11 33

4

**3 4/11**

**Subtract the following mixed numbers.**

1. 32/5 – 11/5 (b) 42/3 – 21/3

(c) 63/5 – 51/5 (d) subtract 71/2 from 101/2

(e) A man had 102/7kg of wheat flour and sold 31/7 kg of wheat flour. What fraction of the wheat flour did he remain with?

(f) 93/4 – 72/4

**COMPARING FRACTIONS USING >, < OR =**

**Example I**

3/7 < 5/7

3 x 7 5 x 7

7 7

3 x 1 5 x 1

= 3 = 5

**Example II**

½ > 1/3

M2 = { 2, 4, 6, 8, 10, -----}

M3 = { 3, 6, 9, 12, 15, ---)

LCM = 6

1 X 6 1 X 6

2 3

1 X 3 1 X 2

= 3 = 2

**Arranging fractions in ascending or descending order.**

**Example I**

Arrange the following fractions in ascending order

5 3 7 4

9 9 9 9

5 x 9 3 x 9 7 x 9 4 x 9

9 9 9 9

5 x 1 3x 1 7 x 1 4 x1

3 4 5 7

9 9 9 9

**Example IV**

**Arrange the following fractions in descending order**.

2 3 5 3

3 4 6 8

2 x 24 3 x 24 5 x 24 3 x 24

3 4 6 8

2 x 8 3 x 6 5 x 4 3 x 3

16 18 20 9

M 3 = { 3,6, 9, 12, 15, 18, 21, **24**, ------}

M4 = { 4, 8, 12, 16, 20, **24**, ------}

M6 = { 6, 12, 18, 21, **24**, -----}

M8 = { 8,16, **24**, ----}

LCM = 24

5/6, ¾, 2/3, 3/8

**Activity**

1. Compare the following fractions using <, < or =
2. 1/3 – ¼ (b) 1/5 – ½

(c) 1/3 – 2/6 (d) 5/6 – 3/8

2. (a) Arrange the following fractions in ascending order.

7/11, 3/11, 4/11, 8/11

1. Arranged the following fractions in descending order.

3/8, ½, ¾

**Week 3**

Addition of fractions with different denominators.

**Example I**

2 + 1 = ( 4 x 2) + ( 5 x 1)

5 4 20

13

20

M5 = { 5, 10, 15, 20, 25, -----}

M4 = {4,8, 12, 16, 20, -----}

The LCM = 20

**Example II**

3 + 1 = ( 1 X 3) + ( 5X 1) = 3 +5

10 2 10 10

= 8/10

M10 = { 10, 20, 30, 40, 50------}

M2 = { 2, 4, 6, 8, 10, -----}

LCM = 10

**Activity**

Add the following fractions.

1. 1/3 + 1/4 (b) 2/5 + ¼

(c) 5/8 + 1/3 (d) 3/5 + ¼

(e) ¾ + 1/6 (f) 1/7 + 1/4

(g) 5/9 + ½ (h) 3/8 + 2/3

**Subtraction of fractions with different denominators.**

**Example I**

2 1 =( 2 x 2) – ( 3 x 1) = 4 – 3

3 2 6 6

= 1/6

M3 = { 3, 6, 9, 12, -----}

M2 = { 2,4,6,8,10, ----}

LCM = 6

**Activity**

**Subtract the following fractions.**

1. 2/3 – ½ (b) 3/6 – 2/4

(c) 4/5 – 1/3 (d) 2/5 – ¼

(e) Karungi had 6/7 of a cake. She gave away 4/5 of it to Murungi. What fraction of the cake did she remain with?

(f) Subtract ¼ from 2/5

(h) 3/7 – 1/3

(i) ¾ - 2/5

Multiplication of fractions and a fraction by a whole number

Example I

1 X 2 = 1 X 2 = 2

3 3 3 X 3 3

Example II

8 X 1 = 2X1

4

= 2

**EXAMPLE III**

In class of 40 pupils ¾ of them are boys and the rest are girls.

1. Find the fraction for the girls

Original fraction = 4

4

4 – 3 = 4 – 3

4 4 4

= ¼

1. How many boys are there in the class?

3 x 40

4

3 x 10

= 30

There are 30 boys in the class

1. Find the number of girls.

1 x 40

4

1 x 10

= 10

There are 10 girls in the class.

**Activity**

Simplify: ¼ x ½

1. 10 x 2/5 (c) ¾ x 18

(d) 3/7 x 14 (e) 1/9 x 4/6

(f) In a meeting there were 40 people. If 5/8 of them were children and the rest were adults.

(i) Find the fraction for the adults

(ii) How many children were in the meeting?

(iii) Find the number of adults.

(iv)How many more children than adults were in the meeting?

**DIVISION OF A WHOLE NUMBER WITH A FRACTION**

Example I

2 ÷ ¼ = 2 x 4 = 2 x 4

1 1 1 x 1

= 8

Example II

How many quarter litre bottles are in 3 cups?

3÷ 1 = 3 x 4

4 1 1

3 x 4

1 x 1

= 12 quarter litre bottles

**Activity**

1. 10 ÷ ½
2. How many 5 litre jerry cans are in 20 litres?
3. How many halves are in 3 wholes?

**EXAMPLE II**

Sixty five and three tenths

T O . Tth

6 5 3

Sixty five = 65.0

Three tenths = 3 + 0.3

10 65.3

**Example II**

Seven hundredths

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | . | Tth | Hth |
| 0 |  | 0t | 7h |

Seven hundredths = 7/100

= 0.07

**Example IV**

Five hundred ninety three and forty six hundredths

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| H | T | O | . | t | h |
| 5 | 9 | 3 |  | 4 | 6 |

Five hundred ninety three = 593.00

Forty six hundredths + 0.46

593.46

(d) Opio has 3 litres of milk. He gives ¼ of milk to each child. How many children does he give the milk?

(e) Divide 40 litres of juice into ½ litres. How many half litres will you get?

(f) Divide 32 by 1/8

**DECIMALS**

Writing wholes and decimals in figures

Example I

Two tenths

|  |  |  |
| --- | --- | --- |
| 0 | . | Tth |
| 0 |  | 2 |

Two tenths = 2 .

10

= 0.2

**Activity**

**Write the following decimals in figures**

1. Nine tenths
2. Four hundredths
3. Six and seven tenths
4. Thirty one and six hundredths
5. Eight hundred forty nine and seventy five hundredths
6. Nine thousand four hundred twenty three and sixty five hundredths.
7. Forty seven thousand three hundred sixteen and thirty two hundredths.

Writing decimals in words

**Example I**

0.2

|  |  |  |
| --- | --- | --- |
| 0 | . | Tth |
| 0 |  | 2 |

2/10 = two tenths

**Example II**

Express 5.8 in words.

|  |  |  |
| --- | --- | --- |
| 0 | . | Tth |
| 5 |  | 8 |

5 five

8/10 eight tenths

Five and eight tenths

**Example III**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| H | T | O | . | Tth | Hth |
| 6 | 7 | 5 |  | 8 | 6 |

675.86

675 six hundred seventy five

86 eighty six hundredths

Six hundred seventy five and eighty six hundredths

1. Express the following decimals in words.
2. 0.8 (b) 7.9 (c) 0.04 (d) 69.5

(e) 235.34 (f) 9258.76

**WEEK 4, LESSON I**

Place values of wholes and decimals

**Wholes** **decimals**

TH H T O Tth Hth THth

8 3 6 9 4 2 7

Ones

Tens Tenths

Hundreds Hundredths

Thousands thousands

**Example I**

What is the place value of 7 in 8369.42**7**?

The place value of 7 in 8369.427 is thousandths.

**Example II**

What is the place value of 2 in 6.2?

|  |  |  |
| --- | --- | --- |
| 0 | . | Tth |
| 6 |  | **2** |

The place value of 2 in 6.2 is tenths.

**Activity**

1. Find the place value of each digit in 45.3
2. What is the place value of 9 in 714.92?
3. Write down the place value of 6 in 2935.16
4. Find the place value of 8 in 278.09
5. What is the place value of 2 in 92.3?
6. Find the place value of each digit in 674.95

**WEEK 4 LESSON 2**

**VALUES OF WHOLES AND DECIMALS**

**Place values** **values**

89.64

Hundredths 4 hundredths = 4/100  0.01 x 4 = 0.04

Tenths 6 tenths = 6/10 0.1 x 6 = 0.6

Ones 9 ones = 9 9 x 1 = 9

Tens 8 tens = 80 8 x 10 = 80

What is the value of 7 in 42.07?

State the value of 9 in 983.572.

Find the value of each digit in 249.75

**WEEK 4 LESSON 3**

Expansion of whole numbers and decimals

Example I

Expand 645.37 using values

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| H | T | O | . | Tth | Hth |
| 6 | 4 | 5 |  | 3 | 7 |

(6 x 100) + (4 x 10) + ( 5 x 1) + (0.1 x 3) + ( 0.01 x 7)

600 + 40 + 5 + 0.3 + 0.0.7

**Writing the expanded whole numbers and decimals in short form.**

**Example I**

What number has been expanded to give: 9000+600+30+8+0.5+0.027

9000.00

600.00

30.00

+ 8.00

0.50

0.08

9,638.58

**Example I**

What is the value of 6 in 89.64?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| T | O | . | Tth | Hth |
| 8 | 9 |  | **6** | 4 |

6 tenths = 6/10

* 1. x 6)

= 0.6

**Example II**

State the value of 3 in 95.63

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| T | O | . | Tth | Hth |
| 9 | 5 |  | 6 | **3** |

3 hundredths = 3/100

3/100 = ( 0.01 x 3)

**= 0.03**

**Activity**

1. find the value of each digit in 42.8
2. What is the value of 4 in 136.4?
3. State the value of 6 in 57.46.

**Activity**

1. Expand the following numbers using values
2. 8.3 (b) 54.7 (c) 296.87 (d) 695.4

(e) 7425.98 (f) 964.53

2. Write the following numbers as single numerals.

(a) 3 + 0.8 (b) 50 + 7 + 0.4 + 0.03

(c) 600 + 5 + 0.9 + 0.08

(d) 7000 +800 +3 +0.2 + 0.05 + 0.009

**WEEK 4 LESSON 4**

**ADDITION AND SUBTRACTION OF DECIMALS**

Example I

0.3 + 6.9

0 . 3

+ 6 . 9

7 . 2

**Example II**

0.56 + 45.37

45.37

+ 0.56

46.93

Example III

Subtract: 9 – 0.5

9 . 0

- 0 . 5

8 . 5

**Example IV**

A trader made 5.3 litres of juice and sold 2.8 litres, how many litres of juice remained?

4 . 3 litres

- 2 . 8 litres

2 . 5 litres

**Activity**

1. (a) Find the sum of 65 and 9.7
2. Add: 2.7 + 8.92 + 4.375
3. Nabitosi bought 625.9 metres of ribbon. Agigo bought 58.3 metres of ribbon. What length of ribbon do they gave altogether?
4. Akao mixed 17.2 litres of pineapple juice with 29.3 litres of orange juice. How many litres of mixed juice did she make?
5. (a) Subtract: 97.4 – 13.69
6. Find the difference between 5.6 and 52.
7. Simplify: 29 – 6.7
8. Adyebo fetched 9 litres of water. Her mother used 5.8 litres, how many litres of water remained?
9. Simplify: 2.76 – 1.93

**WEEK 4 LESSON 5**

**WRITING DECIMALS AS FRACTIONS**

**Example I**

Write 0.8 as a common fraction

|  |  |  |
| --- | --- | --- |
| 0 | . | Tth |
| 0 |  | 8 |

Eight tenths – 8/10

**Example II**

49.5

|  |  |  |  |
| --- | --- | --- | --- |
| T | O |  | Tth |
| 4 | 9 |  | 5 |

Forty nine = 49

Five tenths = 5/10

49 + 5/10

495/10

**Example III**

0.09

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | . | Tth | Hth |
| 0 |  | 0 | 9 |

Nine hundredths = 9/100

**Activity**

**Express the following decimals as fractions**

1. 0.8 (b) 0.07 (c) 0.39 (d) 87.5

(e) 142.3 (f) 56.29 (g) 368.45

(h) 792.82

(i) Write 0.3 as a vulgar fraction.

**WEEK 5 LESSON I**

Writing fractions as decimals

**Example I**

0 . 3 0.3

10 = 10 3.0

0 x 10 = 0

3 0

3 x 10 3 0

**Example II**

2 0 . 4

5 5 2 . 0

0 X 5 = 0

2 0

5 X 4 2 0

**Example III**

8 2 = 80+2 = 82 82.

10 10 10 10

= 8.2

**Example IV**

3 0.75

4 4 3.00

0 X 4 0

3 0

7 X 4 2 8

20

5 X 4 2 0

**ACTIVITY**

Express the following common fractions as decimals.

1. 8/10 (b) 3/5 (c) ¼ (d) 4/5

(e) 1/5 (f) ½ (g) 24/100

2. Change mixed numbers to decimals

(a) 34/10 (b) 248/10 (c) 396/10

**WEEK 5 LESSON 2**

**Theme 3**: Geometry

**Topic 1:** 2 dimensional geometry

**Plane figures**

A polygon is a closed sided figure.

Properties of polygons

|  |  |  |  |
| --- | --- | --- | --- |
| Name | polygon | Numbers of sides | Number of angles |
| Right angled triangle |  | 3 sides  All the sides are different | 3 angled  One of the three angles must be a right angle.  It is 900  Symbol for right angle |
| Equilateral triangle |  | 3 sides  All the sides are equal | 3 angles  All the angles are equal  Each angle = 600 |
| kite |  | 4 sides  Two opposite sides are equal | 4 angles |
| rhombus |  | 4 sides  All the four sides are equal | 4 angles |
| trapezium |  | 4 sides  Two opposite sides are parallel | 4 angles |
| trapezium |  | 4 sides  Two opposite sides are parallel.  Two opposite sides are equal | 4 angles |
| parallelogram |  | It has 4 sides  Two opposite sides are equal | 4 angles |
| Isosceles triangle |  | 3 sides  Two opposite sides are equal | 3 angles  Two opposite angles are equal |
| Quadrilateral or  Quadrangle  A four plane figure  (i) square |  | 4 sides  All the four sides are equal | 4 angles  All the four angles are equal.  Each angle is a right angle  It is 900 |
| rectangle |  | 4 sides  Two opposite sides are equal | 4 angles  All the four angles are equal  Each angle is a right angle.  It is 900 |
| pentagon |  | 5 sides | 5 angles |
| hexagon |  | 6 sides | 1. angles |

5. A seven sided figure septagon or heptagon.

6. A plane figure with 8 sides is octagon.

7. A nine sided figure is nonagon

8. A plane figure with 10 sides is decagon.

9. A polygon with all sides nuo decagon or hendecagon.

10. A twelve sided plane figure is duo decagon.

**FOLDING LINES OF SYMMETRY**

A folding line of symmetry divides a figure or an object into 2 equal parts.

None should overlap.

Example I

How many lines of folding symmetry does a square have?

A square has 4 lines of folding symmetry.

**Activity**

1. Name the following shapes.

(i) (ii)

1. Find the folding lines of symmetry in the following figures.
2. (b)



Example III

p = S + S +S +S

P = 9cm + 5cm + 7cm + 5cm

P = 26cm

Activity

Find the perimeter of the following 2 – dimensional

1. (b) 5cm

5hm 4cm 7cm

7hm 10cm

(c) 5cm

8dm 11dm 2cm

8cm 7cm

6cm

6dm 12cm

2. How many lines of folding symmetry does letter B have?

3. How many sides does a pentagon have?

4. How many right angles does a rectangle have?

5. Draw a symbol for a right angle.

**WEEK 5 LESSON 3**

Finding perimeter of 2 dimensional figures

Perimeter is the total distance round the figure

Example I

Find the perimeter of a square.

5m

P = S + S+ S+

P = 5m + 5m + 5m + 5m

P = 20m

Example II

4dm

9dm

P= L + W + L + W

P = 9dm + 4dm + 9dm + 4dm

**P = 26 dm** 10cm

9m

15m

2. Daddy had a square garden measuring 10m long. Find the total distance round the garden.

1. Kato had a garden of length 24cm and width 16cm. Find the total distance round the garden.

**WEEK 5, LESSON 4**

Finding area of 2 dimensional figures

Area is the number of square unit needed to cover the inside region of a figure.

**Examples**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

3 squares

4 squares

Area = L X W

Area = 4 squares x 3 squares

Area = 12 square unit.

**.. Area is measured in square units.**

**Example II**

Find the rectangle of the figure

3cm

10cm

Area = L X W

Area = 10cm x 3cm

Area = 30cm2

Example III

9m

Area = S X S

Area = 9m x 9m

Area = 81m2

**Activity**

(a)

7cm

8m

9cm

Find the area of the following figures.

(c) Kato had a rectangular garden of length 16m and width 4m. Find the area of the garden.

(d) A square garden measures 10m long. Calculate its area.

(e) (f)

12cm

12dm

10dm

**stop**

**CIRCLES**

Parts of a circle

Radius starts from the centre to the edge of the circle.

Diameter passes through the centre and touches the edges of the circle.

Chord does not pass through the centre but touches the edges of the circle.

Circumference is the total distance round the circle.

X A

S

Y

B

Point O is the centre of a circle.

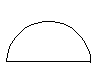
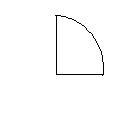
XY = chord

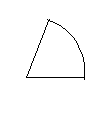
AB = diameter

OS radius

**Example II**

Shapes formed from the circle

semi circle quadrant



**Example III**

If the diameter of a circle is 16cm. Find its radius.

Radius = D

2

= 16

2

Radius = 8cm

**Example IV**

If the radius of a circle is 15cm. Find its diameter

D = 2r

=2 x r

= 2 x 15cm

= 30cm

**Activity**

Name the marked lines in the circles.

B

X Y

A

S T

P

**STOP**

How many pupils are there in the class?

How many pupils were absent on Monday?

How many more pupils attended on Friday than Tuesday?

Week 9, lesson 1

**INTERPRETATION OF GRAPHS AND DATA**

**BAR GRAPHS**

The bar graph below shows cars counted in a week by P.4 pupil.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Mon Tue Wed Thur Fri Sat Sun

**Days of the week**

On which day were the least number of cars counted?

Which days have the same number of cars counted?

How many cars were counted on Wednesday?

How many more cars were counted on Thursday than on Sunday?

Find the total number of cars counted in week.

**WEEK 9 LESSON 2**

Pictographs

Pictographs are also called picture graphs.

Pictures are used to represent a certain number of objects or items.

**Example I**

If  represents 5 balls, how many balls are represented below?

   ?

**Example II**

The pictograph shows apples given to five children.

|  |  |
| --- | --- |
| Name | Number of apples |
| Akullo | C:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.png |
| Kambe | C:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.png |
| Kizito | C:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.png |
| Atim | C:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.png |
| Aine | C:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.pngC:\Users\user\Desktop\apple.png |

Key = 10 apples

1. How many apples did Kambe get?

10

X4

40 apples

1. How many more apples did Kizito get than Akullo?

10 x 7 = 70

10 x 3 = 30

40 apples

**Activity**

The pictograph below shows fish caught from Uganda Lakes

|  |  |
| --- | --- |
| Lake | Number of fish |
| L.Victoria | D:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpg |
| L. Kyoga | D:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpg |
| L. Edward | D:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpg |
| L. Goerge | D:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpgD:\MY PHOTOZ\Luganda-BK1\Fish.jpg |

Key = 10 fish

How many fish are caught from L. Edward?  
Which Lake has the highest number of fish caught?

Which Lakes have the same number of Fish caught?

How many more fish are caught from L. Victoria than L.Kyoga

Find the total number of fish caught from the four Lakes.

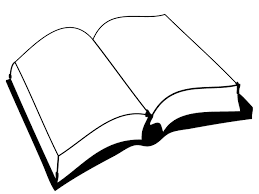
**WEEK 9, LESSON 3**

Drawing pictographs

**Example I**

The table below shows books given to classes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| classes | P.2 | P.3 | P.4 | P.5 | P.6 | P.7 |
| Number of books | 40 | 80 | 90 | 50 | 60 | 50 |

Key [](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk) = 10 books

1. Draw a pictograph to represent the information

P.2 P.3 P.4 P.5 P.6 P.7

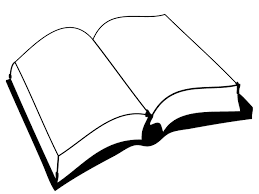
40 80 90 50 60 50

10 10 10 10 10 10

4 bks 8 bks 9 bks 5bks 6bks 5bks

**The pictograph shows books given to classes**

|  |  |
| --- | --- |
| class | Number of books |
| P.2 | [Image result for a bookImage result for a bookImage result for a bookImage result for a book](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk) |
| P.3 | [Image result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a book](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk) |
| P.4 | [Image result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a book](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk) |
| P.5 | [Image result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a book](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk) |
| P.6 | [Image result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a book](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk) |
| P.7 | [Image result for a bookImage result for a bookImage result for a bookImage result for a bookImage result for a book](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk) |

Key = [](http://www.google.com/imgres?imgurl=http://www.clker.com/cliparts/H/Q/X/j/w/j/a-book-without-background.svg&imgrefurl=http://www.clker.com/clipart-a-book-without-background-1.html&h=480&w=640&tbnid=frltXk99Kfx0ZM:&zoom=1&docid=hDtV6KiDtazN_M&ei=sU9lVfjtBIfD7gbJsIK4BQ&tbm=isch&ved=0CFUQMygZMBk)= 10 books

**Activity**

Draw a pictograph and show the information

**Balls given to five pupils**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Doreen | Diana | Daphine | Daizy | Damalie |
| Number of balls | 60 | 70 | 40 | 50 | 40 |

Key  = 10 balls

Who got the same number of balls?

How many more balls did Diana get than Damalie?

Find the total number of balls given to Doreen, Daphine and Daizy

**WEEK 9, LESSON 4**

**LINE GRAPHS**

Lines are used to show the information on the graphs.

Example I

The graph shows the age of 5 pupils.

**Age of pupils**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Cate Ali Tom Sam Joy

**Names of pupils**

How old is Sam?

Who are the oldest pupils?

(i) Cate (ii) Tom

By how many years is Tom older than Joy

1. 2

* 6

6 years

**Activity**

The line graph below shows the temperature recorded in a week.

Temperature

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Mon Tue Wed Thur Fri Sat Sun

**Days of the week**

How many degrees were recorded on Thursday?

Which day has the highest temperature recorded?

How many more degrees were recorded on Sunday than Thursday?

On which day was 200C recorded?

Find the total temperature recorded in a week.

**WEEK 9 LESSON**

Drawing line graphs

The table below shows the mass of five children in kg.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Jim | Aisha | Leo | Otim | Loy |
| Mass in kg | 60 | 50 | 70 | 60 | 40 |

**Mass of pupils in KG**

70

60

Mass in 50

Kg

40

30

20

10

0 Jim Aisha Leo Otim Loy

Names of pupils

1. How many pupils are shown on the graph?
2. How heavy is Aisha?
3. Find the total mass in Jim, Leo and Otim.

**Activity**

The table below shows records of births in Hojo Hospital

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Months | Jan | Feb | Mar | Apr | May | June |
| Number of births | 120 | 80 | 100 | 60 | 70 | 60 |

1. (a) Draw a line graph to show the information.
2. How many births were recorded in the hospital in January?
3. How many months have the same births recorded?
4. How many more births were recorded in February than June?