

NUR AFRICA ACADEMY



MATHS Revision Note for Grade - 4

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Chapter Three

Fractions and Decimals

- ▶ *3.1 Fractions*
- ▶ *Fractions are numbers which are expressed in the form $\frac{a}{b}$ where a & b are whole numbers.*
- ▶ *In any fraction,*
- ▶ *the number on the top (the dividend) is the numerator and*
- ▶ *the number on the bottom (the divisor) is called the denominator.*
- ▶ *For $\frac{1}{2}$, the numerator is 1 & the denominator is 2.*



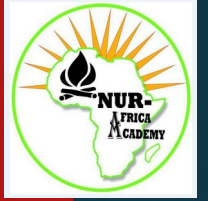
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3.1.2 Proper and improper fractions

- ▶ *In a proper fraction, the numerator is less than the denominator.*
- ▶ *In an improper fraction, the numerator is greater than the denominator.*
- ▶ **A fraction**
 - ▶ *is Proper if $a < b$.*
 - ▶ *is improper if $a > b$.*
- ▶ **Example 6:**
 - ▶ *, , are proper fractions.*
 - ▶ *, , are improper fractions.*





3.1.3. *Equivalent fractions*

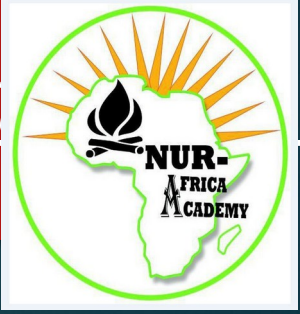
- ▶ *Fractions that are equal to each other, but have different numerators and denominators, are called equivalent fractions.*
- ▶ *To get equivalent fractions, We multiply or divide both the numerator and the denominator by the same number.*
- ▶ *Examples: $\frac{1}{2} = \frac{2}{4}$, $\frac{1}{2} = \frac{3}{6}$, $\frac{1}{2} = \frac{4}{8}$ so $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$ and $\frac{4}{8}$ are equivalent fractions.*
- ▶ *We can also divide both the numerator and the denominator by the same number to get equivalent fractions.*

Example: Find two equivalent fractions for $\frac{1}{2}$.

Solution :

- ▶ *if we divide the numerator & the denominator by the same number we get ,*
 $\frac{1}{2} \div \frac{1}{1} = \frac{1}{2}$, $\frac{1}{2} \div \frac{2}{2} = \frac{1}{4}$, $\frac{1}{2} \div \frac{3}{3} = \frac{1}{6}$ Therefore, $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{6}$ are equivalent fractions.

3.1.4. Addition and subtraction of fractions with the same denominator



To add and subtract fractions that have the same denominator we simply add or subtract the numerator and take one of the denominators as it is.

Example: Add & subtract the following fractions.

a) $+$ b) $-$ c) $+$ $+$

Solution:

a) $+$ $=$ $=$

b) $-$ $=$ $=$

c) $+$ $+$ $=$ $=$



3.2 Decimals

- ▶ *Decimals are used to represent fractions in our usual base ten place-value notation.*
- ▶ *Example: A cashier way of writing 8 Birr and 25 cents is 8.25 Birr.*
- ▶ *The point is a decimal point, and what follows it is a part of a Birr.*
- ▶ *When we talk about tenths of something, it means we are dividing by ten.*
- ▶ $1 \div 10 = 0.1$ $5 \div 10 = 0.5$
- ▶ *When we are talking about hundredths of something, we are dividing by hundred.*
- ▶ $1 \div 100 = 0.01$ $20 \div 100 = 0.20$
- ▶ *And thousandths means that we are dividing by a thousand.*
- ▶ $1 \div 1000 = 0.001$ $345 \div 1000 = 0.345$



3.2.2. The number line

- ▶ A number line can also be used to picture decimals.
- ▶ Example: On the following number line, what are the values of P and Q in decimal and fraction form?



- ▶ When we start counting decimals from 0.0 , the value of P= 0.6 and Q= 1.4
- ▶ In fraction P = and Q =



