

**Year 3 Mathematics
Term 1**

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Week 1 COMMON FRACTIONS

Day 1 Date _____

Fractions are used every day by people who don't even realise that they are using fractions. Name ten examples.

Read the definitions.



The **numerator** is the top number in a common fraction. It shows how many parts we have.

The **denominator** is the bottom number in a common fraction. It shows how many equal parts the item is divided into.

Equivalent fractions are fractions which have the same value, even though they may look different.



Why do we need to know what LCM is when we add fractions?

Complete the fractions to make them equal:

a. $\frac{2}{4} \times 2 = \frac{4}{8}$

b. $\frac{3}{5} = \frac{\square}{10}$

c. $\frac{2}{6} = \frac{\square}{12}$

d. $\frac{6}{7} = \frac{\square}{21}$

e. $\frac{2}{4} = \frac{\square}{2}$

f. $\frac{9}{15} = \frac{\square}{5}$

g. $\frac{5}{6} = \frac{\square}{18}$

h. $\frac{7}{9} = \frac{\square}{18}$

i. $\frac{6}{22} = \frac{\square}{11}$

j. $\frac{20}{25} = \frac{\square}{100}$

You need to explain your answers to a brother, sister or friend. Use diagrams to explain the answers.



1. What happens to the numerator and denominator? Extend the pattern by writing down three more equivalent fractions.

a. $\frac{1}{3} \times 2 = \frac{2}{6} \times 2 = \frac{4}{12} \times 2 = \frac{8}{24} \times 2$

b. $\frac{1}{5} = \frac{3}{15} = \frac{9}{45} = \frac{27}{135}$

2. Complete the pattern. You may use a calculator.

a. $\frac{5}{6} \times 2 = \frac{10}{12} \times 2 = \frac{20}{24} \times 2$

 = =

b. $\frac{3}{4} = \frac{9}{12} = \frac{27}{36}$

 = =

c. $\frac{9}{11} = \frac{18}{22} = \frac{36}{44}$

 = =

d. $\frac{1}{7} = \frac{5}{35} = \frac{25}{175}$


 = =

3. Fill in the empty boxes.

a. $\frac{1}{2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{\square}{4}$

b. $\frac{2}{6} + \frac{1}{2} = \frac{\square}{12} + \frac{6}{12}$

1. Complete the fraction sums using the diagrams on the right.

a. $\frac{3}{4} = \frac{1}{8} + \frac{\quad}{\quad} =$ 

b. $\frac{4}{6} = \frac{1}{3} + \frac{\quad}{\quad} =$ 

2. Complete the sums.

a. $\frac{1}{2} = \frac{1}{8} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$

b. $\frac{1}{2} = \frac{1}{14} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$

3. Add and then subtract to test your answer.

a. $\frac{5 \times 2}{7 \times 2} + \frac{2}{14}$

=

=

Test:


b. $\frac{7}{9} + \frac{1}{27}$

=

=

Test:

Add common fractions with the same denominators.



Proper fraction	Improper fraction	Mixed number
$\frac{3}{4}$	$\frac{5}{4}$	$3\frac{1}{2}$

Mixed number	$1\frac{1}{4}$	\longleftrightarrow	$\frac{5}{4}$	Improper fraction
--------------	----------------	-----------------------	---------------	-------------------

Mixed number to an improper fraction: 1 (whole number) $\times 4$ (denominator) $+ 1$ (numerator) = 5 .


Sometimes we need to change proper fractions to improper fractions or vice versa.

Improper fraction to a mixed number: 5 (numerator) $\div 4$ (denominator) = 1 remainder 1

Add the following, write it as a mixed number, and simplify if necessary.

Example: $\frac{1}{3} + \frac{4}{3}$

$$= \frac{5}{3}$$

$$= 1\frac{2}{3}$$


When we add fractions the denominators should be the same.

a. $\frac{2}{5} + \frac{4}{5} =$

b. $\frac{5}{9} + \frac{6}{9} =$

c. $\frac{3}{4} - \frac{2}{4} =$

d. $\frac{7}{10} + \frac{5}{10} =$

e. $\frac{5}{6} + \frac{3}{6} =$

f. $\frac{5}{7} + \frac{6}{7} =$

Calculate the following:

a. $\frac{1}{3} + \frac{3}{4}$

Multiples of 3:
_____Multiples of 4:
_____LCM: _____

b. $\frac{4}{5} + \frac{1}{6}$

Multiples of 5:
_____Multiples of 6:
_____LCM: _____

a. $2\frac{1}{4} + 5\frac{2}{4}$

b. $7\frac{1}{8} - 3$

a. $5\frac{1}{3} + 1\frac{2}{4}$

b. $4\frac{3}{8} - 3\frac{4}{6}$

Week 2 COMMON FRACTIONS...continued

Day 1

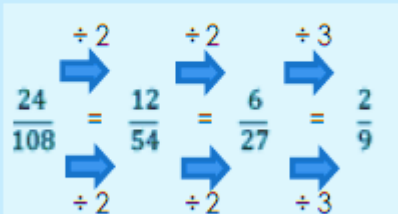
Date _____

Multiply common fractions and simplify

Simplifying fractions means to make the fraction as simple as possible. Why say four eighths ($\frac{4}{8}$) when you really mean half ($\frac{1}{2}$)?

Show a friend or family member how this fraction was simplified.

Explain this:



Simplify the following:

Example: $\frac{15}{20}$
 $= \frac{15}{20} \div \frac{5}{5}$
 $= \frac{3}{4}$

a. $\frac{4}{12}$

b. $\frac{8}{16}$

c. $\frac{5}{20}$

d. $\frac{16}{24}$

e. $\frac{7}{21}$

f. $\frac{24}{64}$

Multiply and simplify if possible:

Example: $\frac{1}{3} \times \frac{4}{8}$
 $= \frac{4}{24} = \frac{4}{24} \div \frac{4}{4}$
 $= \frac{1}{6}$

a. $\frac{1}{2} \times \frac{4}{8} =$

b. $\frac{7}{7} \times \frac{3}{6} =$

c. $\frac{8}{10} \times \frac{10}{12} =$

d. $\frac{1}{3} \times \frac{5}{5} =$

e. $\frac{1}{2} \times \frac{3}{4} =$

f. $\frac{1}{2} \times \frac{2}{7} =$

Simplify the improper fraction where necessary and write it as a mixed number.

Example: $\frac{14}{4} = \frac{7}{2} = 3\frac{1}{2}$

a. $\frac{19}{3}$

b. $\frac{21}{5}$

c. $\frac{20}{6}$

d. $\frac{22}{7}$

e. $\frac{10}{8}$

f. $\frac{21}{9}$

Multiply and Simplify:

Example: $\frac{6}{4} \times \frac{5}{2}$
 $= \frac{30}{8}$
 $= 3\frac{6}{8}$
 $= 3\frac{3}{4}$

HCF is 2

a. $\frac{3}{2} \times \frac{7}{6} =$

b. $\frac{6}{3} \times \frac{6}{5} =$

c. $\frac{8}{7} \times \frac{6}{4} =$

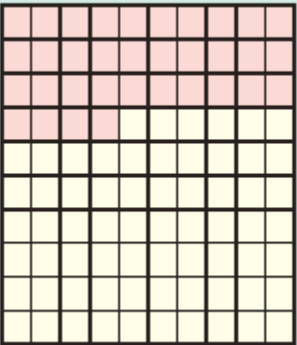
d. $\frac{5}{4} \times \frac{9}{8} =$

e. $\frac{6}{5} \times \frac{9}{8} =$

f. $\frac{9}{7} \times \frac{6}{3} =$

Fractions, decimals and percentages.

Explain the following:



$\frac{34}{100} = 0,34 = 34\%$

Quick quiz: What does the following mean:

- Cent?
- Century?
- Centipede?
- Percentage?

100

Write the following as a fraction and as a decimal fraction.

Example: 18% or $\frac{18}{100}$ or 0,18

$= \frac{9}{50}$

If possible write the fraction in the simplest form.

$\frac{18}{100}$ Simplified is $\frac{9}{50}$

a. 37%	b. 25%	c. 83%
<input type="text"/>	<input type="text"/>	<input type="text"/>
d. 90%	e. 55%	f. 3%
<input type="text"/>	<input type="text"/>	<input type="text"/>

Write the following as a fraction in its simplest form.

Percentage	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Fraction										
Simplest form										

Calculating percentages.**Example:** 18% of R20

$$\begin{aligned}
 &= \frac{18}{100} \times \frac{R20}{1} \\
 &= \frac{R360}{100} \\
 &= R3,60
 \end{aligned}$$

a. 20% of R24

b. 70% of R15

c. 60% of R95

d. 80% of R74

e. 30% of R90

f. 50% of R65

Calculate by simplifying.**Example:** 60% of R150

$$\begin{aligned}
 &\frac{60}{100} \times \frac{R150}{1} \\
 &= \frac{3}{5} \times \frac{R150}{1} \\
 &= \frac{R450}{5} \\
 &= R90
 \end{aligned}$$

I can write 60% as $\frac{60}{100}$

or

 $\frac{60}{100}$ simplified is $\frac{6}{10} = \frac{3}{5}$

$$\begin{aligned}
 &= \frac{9\ 000}{100} \\
 &= R90
 \end{aligned}$$

a. 30% of R1,80

b. 80% of R1,60

c. 90% of R8,10

Percentage increase and decrease:

What do increase and decrease mean?

Name five situations where you would like something to be **increased**.

Name five situations where you would like something to be **decreased**.

Name five situations where you would like something not to **increase**.

Name five situations where you would like something not to **decrease**.

Calculating percentage increase.

Example: Calculate the **percentage** increase if the price of a bus ticket of R60 is increased to R84.

$$\frac{24}{60} \times \frac{100}{1}$$

$$= \frac{240}{60}$$

$$= 40\%$$

We first need to ask by how much the bus ticket price was increased.

It was increased by R24 because R84 minus R60 is R24.

$\frac{24}{60}$ is the price increase.

To work out the percentage increase we multiply by 100.

<p>a. R50 to R70</p> <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> <p>Price increase: _____</p> </div>	<p>b. R80 to R120</p> <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> <p>Price increase: _____</p> </div>	<p>c. R15 to R18</p> <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> <p>Price increase: _____</p> </div>
<p>d. R25 to R30</p> <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> <p>Price increase: _____</p> </div>	<p>e. R100 to R120</p> <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> <p>Price increase: _____</p> </div>	<p>f. R36 to R54</p> <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> <p>Price increase: _____</p> </div>

Calculating percentage decrease:

Example: Calculate the percentage decrease if the price of petrol goes down from 20 cents a litre to 18 cents.

$$\begin{aligned} & \frac{2}{20} \times \frac{100}{1} \\ &= \frac{200}{20} \\ &= 10\% \end{aligned}$$

We first need to say by how much the petrol price was decreased.

It was decreased by 2c because 18c + 2c gives you 20c.

$\frac{2}{20}$ is the decrease in price.

Then, to work out the percentage decrease, we multiply $\frac{2}{20}$ by 100.

a. R20 to R15

Price decrease: _____

b. R50 to R45

Price decrease: _____

c. R18 to R15

Price decrease: _____

d. R24 to R18

Price decrease: _____

e. R90 to R80

Price decrease: _____

f. R28 to R21

Price decrease: _____

WEEK 3 & 4 DECIMAL FRACTIONS

Day 1 Date _____

How fast can you count from:

0,2 to 1,3

0,2; 0,3; 0,4; _____

1,12 to 1,2

1,2 is the same as 1,20.

1,12; 1,13; 1,14; _____

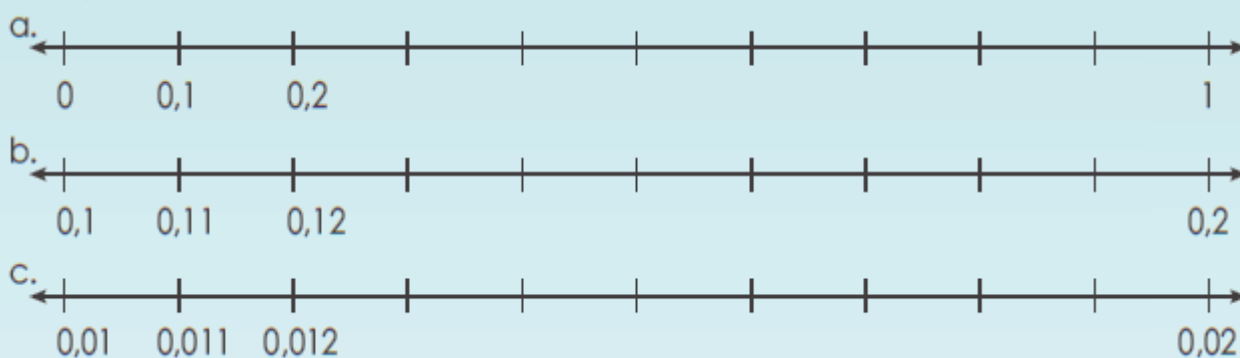
1,251 to 1,26

1,26 is the same as 1,260.

1,251; 1,252; 1,253; _____

How does this link to decimal fractions: kg, m, ml, cm, etc.?

Complete the number lines.



Complete the following.

Example: 0,34; 0,35; 0,36; ____; ____; 0,39
 = 0,34; 0,35; 0,36; **0,37; 0,38**; 0,39

a. 0,1; 0,2; 0,3; ____; 0,5; 0,6; 0,7; 0,8; 0,9

b. 0,21; 0,22; 0,23; ____; 0,25; 0,26; 0,27; 0,28; 0,29

c. 0,31; 0,32; 0,33; ____; ____; 0,36; 0,37; 0,38; 0,39

Extend by 5 decimals.

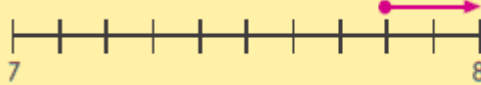
Example: 5,36; 5,37; 5,38; ...
 = 5,36; 5,37; 5,38; **5,39; 5,4; 5,41; 5,42; 5,43**

a. 7,7; 7,8; 7,9; | _____

b. 3,64; 3,65; 3,66; | _____

Round off to the nearest unit.

Example: 7,8
Rounded off to 8



a. 3,1

b. 2,8

c. 5,27

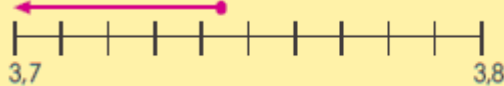
d. 5,3

e. 3,9

f. 6,89

Round off to the nearest tenth

Example: 3,745
Rounded off to 3,7



a. 6,14

b. 3,578

c. 5,63

d. 68,467

e. 7,223

f. 4,32

Rounding off to the nearest unit and tenth.

		Unit	Tenth
a.	3,84		
b.	3,89		
c.	14,27		
d.	999,31		
e.	4,09		
f.	51,781		

Addition and subtraction with decimal fractions.

Look at the following pictures. Make up your own addition and/or subtraction sums.



Example 1: $2,37 + 4,53$
 $= (2 + 4) + (0,3 + 0,5) + (0,07 + 0,03)$
 $= 6 + 0,8 + 0,1$
 $= 6,9$

Example 2: $2,37$
 $+ 4,53$

 $6,90$

Make sure the commas are under each other.

Note that 6,9 and 6,90 are the same.

a. $3,12 + 4,57 =$

b. $5,34 + 2,26 =$

You can check your answer using the inverse operation of addition, that is subtraction.

c. $1,46 + 2,28 =$

d. $3,45 + 4,67 =$

e. $6,58 + 5,78 =$

f. $9,99 + 9,97 =$

Multiplication of decimal fractions

Calculate. (Check your answer using a calculator).

Example:

- $0,2 \times 0,3 = 0,06$
- $0,02 \times 0,3 = 0,006$
- $0,02 \times 0,03 = 0,0006$

Do you notice the pattern?
Describe it.

a. $0,4 \times 0,2 =$

b. $0,3 \times 0,1 =$

c. $0,4 \times 0,5 =$

d. $0,6 \times 0,7 =$

e. $0,04 \times 0,02 =$

f. $0,05 \times 0,1 =$

More multiplication.

Example 1: $0,2 \times 4$
 $= 0,8$

Example 2: $0,02 \times 4$
 $= 0,08$

Example 3: $0,4 \times 3$
 $= 1,2$

a. $0,5 \times 3 =$

b. $0,8 \times 3 =$

c. $0,6 \times 4 =$

d. $0,02 \times 9 =$

e. $0,07 \times 6 =$

f. $0,003 \times 8 =$

Example 1: $0,3 \times 0,2 \times 100$
 $= 0,06 \times 100$
 $= 6$

Example 2: $0,3 \times 0,2 \times 10$
 $= 0,06 \times 10$
 $= 0,6$

a. $0,4 \times 0,2 \times 10 =$

b. $0,5 \times 0,02 \times 10 =$

c. $0,3 \times 0,3 \times 100 =$

Example: $5,276 \times 30$

$$= (5 \times 30) + (0,2 \times 30) + (0,07 \times 30) + (0,006 \times 30)$$

$$= 150 + 6 + 2,1 + 0,18$$

$$= 150 + 6 + 2 + 0,1 + 0,1 + 0,08$$

$$= 158 + 0,2 + 0,08$$

$$= 158,28$$

a. $1,123 \times 10 =$

b. $4,886 \times 30 =$

c. $2,932 \times 40 =$

d. $7,457 \times 60 =$

e. $8,234 \times 20 =$

f. $6,568 \times 80 =$

g. Take your answers from a to f and write them down in ascending order.

Week 5 WHOLE NUMBERS (+, -, × and ÷)

Day 1

Date _____

What does 'arithmetic' mean? Why is it important?

Arithmetic is the oldest and most elementary branch of mathematics and deals with the properties and handling of numbers. It is used by almost everyone for everyday tasks of counting and calculating through to complicated science and business calculations. It involves the study of quantity, especially as the result of combining numbers. Basic arithmetic uses the four operations of addition, subtraction, multiplication and division with integers, rational and real numbers and includes measurement and geometry.

Addition. (REVISION)

1. Calculate.

a.
$$\begin{array}{r} 27\ 835 \\ + 32\ 132 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 45\ 371 \\ + 12\ 625 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 51\ 832 \\ + 32\ 749 \\ \hline \end{array}$$

Subtract and then round off your answers to the nearest ten, hundred and thousand.

Calculate.

$$\begin{array}{r} \text{a.} \quad 457\,834 \\ - 325\,613 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b.} \quad 788\,569 \\ - 123\,479 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c.} \quad 384\,789 \\ - 325\,894 \\ \hline \end{array}$$

Multiply and then round off your answers to the nearest ten, hundred and thousand.

Calculate.

a. $\begin{array}{r} 14\,815 \\ \times 38 \\ \hline \end{array}$	b. $\begin{array}{r} 29\,783 \\ \times 24 \\ \hline \end{array}$	c. $\begin{array}{r} 38\,765 \\ \times 36 \\ \hline \end{array}$
------------------------------------------------------------------	------------------------------------------------------------------	------------------------------------------------------------------

Day 4

Date _____

Divide and then round off your answers to the nearest ten, hundred and thousand.

Calculate:
a. $22 \overline{)36842}$ b. $63 \overline{)96431}$ c. $45 \overline{)76593}$

Complete the following:

5. Calculate the following by illustrating the properties of whole numbers:

Example: $44 + 55 = 55 + 44 = 99$

a. The commutative property of addition and multiplication:

i. $a + b =$ _____

ii. $a \times b =$ _____

b. The associative property of addition and multiplication:

i. $(a + b) + c =$ _____

ii. $(a \times b) \times c =$ _____

a. $51 + (19 + 46) =$ _____

b. $4(12 + 9) =$ _____

c. The distributive property of multiplication over addition and subtraction:

i. $a(b + c) =$ _____


ii. $a(b - c) =$ _____

d. 0 (zero) as the identity element for addition:

e. 1 (one) is the identity element of multiplication:

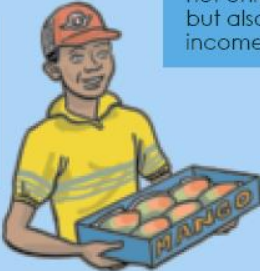
Profit, loss and discount.

Do you know the meaning of profit, loss and discount?





Profit is the surplus remaining after total costs are deducted from total revenue.
Loss is the excess of expenditure over income.
Discount is the amount deducted from the asking price before payment.


Remember profit and loss do not only apply to businesses, but also to your personal income.





Are you making a profit or a loss in these examples? How much profit or loss?
 (Circle the correct answer and calculate the amount.)

a. You are buying sweets for 45c each and selling them for 65c each. I made a profit / loss of _____ (amount) per sweet. 

b. You are buying pencils for R2,00 each and selling them for R2,40 each to your friends. You manage to sell 40 pencils. I made a profit / loss of _____ (amount). 

c. On Saturdays you hire a stall at the local flea-market for R50. You are buying juice for R1,50 each and selling them for R2,50 each. Last Saturday it was cold and you only managed to sell 40. I made a profit / loss of _____ (amount). 

d. You are buying sweets in large packets of 100 for R10,45 per packet. You are selling to your friends for 30c per sweet. During the first break you manage to sell 75 sweets. I made a profit/loss of _____ (amount). 

e. You are buying fruit directly from the market and selling it to your neighbours, friends and family. Last weekend you bought 3 boxes of bananas. Each box contained 12 bunches of 12 bananas each. Each box cost you R75. You managed to sell 80 % of the bananas at 65c each before the rest were too ripe to sell and you had to throw them away. I made a profit/loss of _____ (amount). 

Profit can be calculated in different ways. Normally when we talk about 10 % profit we calculate it on the cost price. We sometimes also refer to a 10 % mark-up.


The formula for the percentage profit is:

$$\text{Profit} = \frac{(\text{Selling Price} - \text{Cost Price})}{\text{Cost Price}} \times 100$$

For example, if I sold a football which cost me R200 for R220 I make a 10% profit.

$$\frac{R20}{R200} \times 100 = 10\%$$

How much must I sell it for?

- You are buying sweets for 45c each and you want to make a 25 % profit. How much must you sell them for? _____ (amount).
- You are buying pens for R1,27 each and you want to make a 17 % profit. How much must you sell them for? _____ (amount). 
- On Saturdays you hire a stall at the local flea-market for R50. You buy juice for R1,50 per box and you normally sell 200 units per Saturday. If you want to make a 35 % profit after paying for the stall, how much must you ask per fruit juice? _____ (amount).

Will I still make a profit if I sell it with discount?

(Circle the correct answer and calculate the amount)

- You are buying sweets in large packets of 100 for R12,45 per packet. You are selling to your friends for 20c per sweet. If they buy 10 sweets or more at a time you give them a 25 % discount. During the first break you sold 35 loose sweets and 25 sweets at discounted price. What will your profit be? _____ (amount).
- You are buying fruit directly from the market and sell it to your neighbours, friends and family. Last weekend you bought 3 boxes of bananas. Each box contained 12 bunches of 12 bananas each. Each box cost you R75. You managed to sell 80 % of the bananas at 65c each. The rest of the bananas got too ripe and you sold them at a discount of 80 %. I made a profit / loss of _____ (amount).

BUDGET.

Do you know what a budget is?
Can I have my own budget or is it only for adults?



Budget is the estimate of cost and revenues over a specified period.



Budget is like a scale where you try to balance your income and your expenses. Important: Your income should always outweigh your expenses.



Creating a budget is the most important step in controlling your money. The first rule of budgeting: **spend less than you earn!**

Example: If you received R50 allowance (pocket money) per month and another R30 for your birthday, you cannot spend more than R80 for the entire month.

STRUCTURING YOUR BUDGET

Determine your income

Make a list of all your possible income and estimate the amount you will earn during the next month.

Income	Estimated amount
Estimated total income	

Estimate your expenses

Make a list of all your possible expenses and estimate the amount you will spend during the next month.

Expenses	Estimated amount
Estimated total expenses	



Spend less than you earn !

Day 4

Date _____

Net income is, like profit, the surplus remaining after all costs are deducted from total (or **gross**) revenue. If the expenses exceed the income we call it a **shortage**.

Am I making a surplus?

Deduct your total expenses from your total income to determine if you are going to make a surplus or shortage.

	Estimated amount
Total income	
Total Expenses	
Net Income	

What can I do with my surplus?

Make a list of what you can do with your surplus.



It is always a bright idea to save for a rainy day !

Savings

If I manage to save R80 every month, how long must I save to buy myself a new computer game at R499.95?

_____ months

TRACK YOUR BUDGET.

Using the table below, draw up a budget in your writing book. Complete your budget and track your actual expenses for the next month.

Income	Actual amount	Estimated amount	Difference
Estimated total income			
Expenses			
Estimated total expenses			
Net Income			

Personal income and expenditure.

1. Read the paragraph below and identify all Petrus’s sources of income. Classify each source of income as fixed, variable or occasional.

Petrus has just started his first job and he earns a basic salary as a sales representative, and also receives allowances for cell phone and travel. He also gets paid commission every three months on the sales that he makes. He has started a small music band and he sometimes gets asked to play at events such as birthday parties and weddings, where he negotiates his hourly fee.

Solutions:

Fixed	Variable	Occasional

2. You are currently in Year 3 and in order to earn extra money you accept a job at a Spur restaurant as a waiter. You work the following shifts per month:

- Four Friday shifts per month for 5 hours. Friday rate/hour = R 20
- Four Saturday shifts per month for 10 hours. Saturday rate/hour = R 30
- Two Sunday shifts per month for 8 hours. Sunday rate/hour = R 40
- Estimated tips earned per month = 1,5 _ your monthly salary.

Calculate your total income for one month.

WEEK 7 FINANCES... continued

Day 1

Date _____

Banking accounts and documents.

1. Understanding a bank statement

Here is an incomplete bank statement for Koketso's savings account at the end of March:

Date	Transaction	Payment	Deposit	Balance
27/02/2013	OPENING BAL			2304,85
1/03/2013	INTEREST ON CREDIT BALANCE		13,95	
1/03/2013	CHEQUE (SALARY)		2100,00	
1/03/2013	ATM CASH	400,00		
5/03/2013	ATM CASH	800,00		
10/03/2013	ATM DEPOSIT		600,00	
22/3/2013	SPENDLESS DEBIT CARD PURCHASE	235,95		

- a. How are the debits and credits indicated on this statement?

- b. Complete Koketso's statement and complete the balance column as a running total.

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27/02/2013	OPENING BAL			2304,85
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1/03/2013	CHEQUE (SALARY)		2100,00	
1/03/2013	ATM CASH	400,00		
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10/03/2013	ATM DEPOSIT		600,00	
22/3/2013	SPENDLESS DEBIT CARD PURCHASE	235,95		

- c. What is Koketso's balance at the end of March?

- a. Koketso aims to keep a minimum balance of R 2500 in his account to earn interest. Is he succeeding?

Banking fees.

Mia has recently open a Global account at Capital Bank. She is concerned about her monthly bank charges. Use the provided brochure and the list of her account activities for the month of April to answer the questions below:

TRANSACTION	FEE
Monthly fees	
Monthly administration fee	4.50
Mobile banking subscription	FREE
Internet banking subscription	FREE
Cash withdrawals	
Supermarket tillpoints	1.00
Capital bank ATM	4.00
Other ATM	7.00
Balance enquiries	
Mobile banking	FREE
Cashier	FREE
Capital Bank ATM	FREE
Other ATM	4.00
Transfers/Payments/Purchases	
Debit card purchase	FREE
Debit order/recurring payment at branch	3.00
Debit order/recurring payment with internet banking	1.50
Payment to other Capital Bank account at branch	3.00
Payment to other Capital Bank account with internet banking	1.50
Other	
SMS notification	0.40
Statement in branch	3.00
Create, change or cancel recurring payment at branch	4.00
Returned debit order/recurring payment (stop order)	4.00
Returned early debit order	FREE
Insufficient funds (other ATM)	4.00

The list of Mia's transactions for April is as follows:

Date	Activities	Amounts
1 Apr 2013	Balance of previous month carried forward	R 210,25
1 Apr 2013	Old Mutual Policy x74534: Debit order returned: insufficient funds*	R 254,39
1 Apr 2013	Balance enquiry (mobile)	R 0,00
2 Apr 2013	Davidsons Textiles: Salary deposit*	R 4500,00
2 Apr 2013	Shoprite: Purchases: Debit card*	R 847,21
2 Apr 2013	Shoprite: Cash withdrawal*.	R 250,00
7 Apr 2013	Old Mutual Policy x74534: Branch Payment	R 254,39
15 Apr 2013	Edgars: Purchases: Debit card*	R 149,59
20 Apr 2013	Capital Bank ATM Withdrawal*	R 200,00
23 Apr 2013	Shoprite: municipal account payment*	R 639,00
28 Apr 2013	FNB ATM Withdrawal*	R 500,00
29 Apr 2013	Balance statement at the branch	R 3,00
30 Apr 2013	Monthly Administration Fee	R 4,50

*** denotes SMS notification for April**

a) How many withdrawals did Mia make during this month?

b) Calculate the amount of money that was spent on monthly shop purchases.

c) Use the relevant resources and calculate the amount of bank fees that Mia should pay for April.

d) Suggest how Mia can further reduce her banking charges.

VAT – Value Added Tax**Calculating VAT and checking till slips**

1. Bongi decides to use the following formula to calculate the cost of the items before VAT, the VAT and the VAT inclusive price.

Total cost (R) = Amount before VAT (R) + 15% of the amount before VAT (R).

Amount	8.76	8,76	21,92	6,13	0,35	17,54	24,55	28,76	a)
VAT	1,31	1,31	3,29	0,92	0,05	b)	c)	d)	e)
Total	10,07	10,07	f)	g)	h)	20,17	28,23	33,07	134,29

2. Bongi's friends Nthabiseng and Thato calculated e) in this way:

$$\text{Nthabiseng: } 15\% \text{ of R } 116,77 = \frac{15}{100} \times \text{R } 116,77 = \text{R } 17,51$$

$$\text{Thato: } \text{R } 134,29 - \text{R } 116,77 = \text{R } 17,52$$

Why do they get different answers?

Day 4 Date _____



Analyse the slip above :

- VAT exempt items total: _____
- VAT inclusive items total: _____
- VAT is 15% of R _____ = _____
- Total VAT is R _____
- Total balance due is R _____ + R _____ + R _____ = R _____.

You are given the following information about bank charges for a Capitec Bank current account.

Withdrawals

Over the counter: R 23,00 plus R 1,10 per R 100 or part thereof

CapitecBank ATM: R 3,50 plus R 1,10 per R 100 or part thereof

Another bank's ATM: R 5,50 plus R 3,50 plus R 1,10 per R 100 or part thereof

Tillpoint - cash only: R 3,65

Tillpoint - cash with purchase: R 5,50

a) Calculate the fee charged for a R 2500 withdrawal from a Capitec Bank ATM.

b) Calculate the fee charged for a R 750 withdrawal from another bank's ATM.

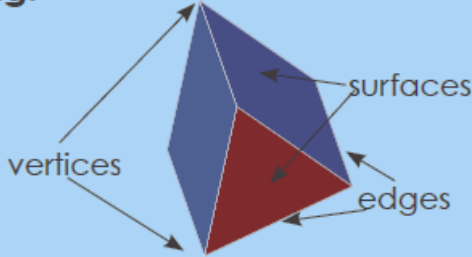
c) Calculate the fee charged for a R 250 withdrawal from the teller at a branch.

d) What percentage of the R 250 withdrawal in question (c) is charged in fees?

e) Would it be cheaper to withdraw R 1500 at the bank, from a Capitec Bank ATM or from a till point with a purchase?

Revise the following:

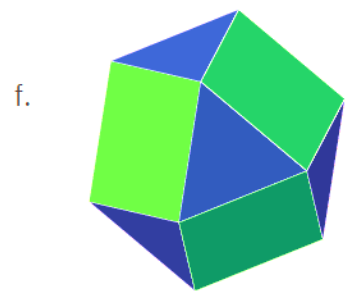
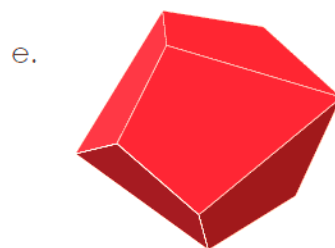
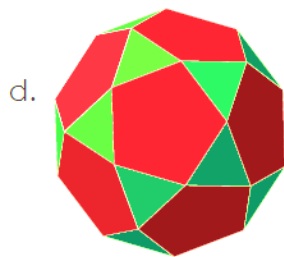
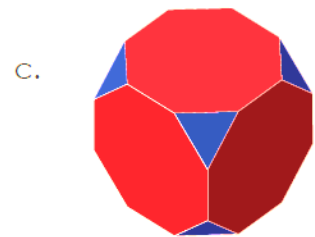
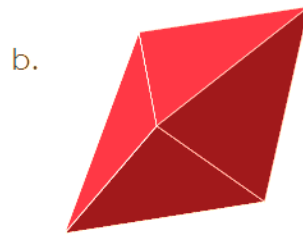
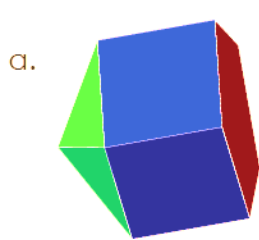
- surfaces (faces)
- vertices
- edges



Identify the surfaces, vertices and edges in this photograph.

Look at the different polyhedra.

1. Identify the surfaces (faces), vertices and edges.



2. Visualise how many vertices a pentagonal prism has. _____











a. How many edges does it have? _____

b. How many faces? _____

c. What about a heptagonal prism? _____

d. Or a heptagonal pyramid? _____

Complete the table.

	Solid	Vertices	Edges	Faces	Calculate $F - E + V$ for each geometric solid. F = faces, E = edges and V = vertices. What do you notice?
Triangular prism		6	9	5	$5 - 9 + 6 = 2$
Rectangular prism		8	12	6	$6 - 12 + 8 = 2$
Pentagonal prism					
Hexagonal prism					
Octagonal prism					
Triangular pyramid					
Square pyramid					
Pentagonal pyramid					
Hexagonal pyramid					
Octagonal pyramid					

Views.

Pyramid of Egypt.



Name and describe the solid from different views.

Imagine you are visiting the pyramids in Egypt.

You are standing on the ground, looking at a pyramid.

What is the maximum number of triangles you see?

What if you were in an aeroplane flying overhead?

Name and describe the solid from different views.



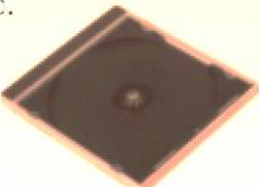

View from the ground

Aerial view





An aerial view is also called a bird's eye view. Why do you think it has this name?



1. What do these objects have in common? When closed, they all have:

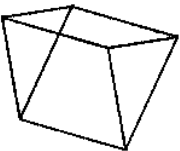
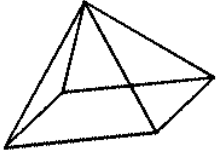
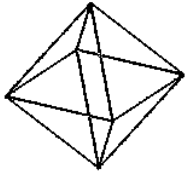
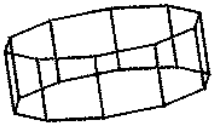
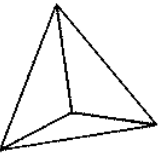
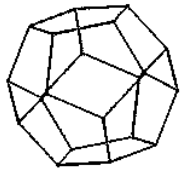
<p>a. </p> <ul style="list-style-type: none"> • ___ faces • ___ edges • ___ vertices 	<p>b. </p> <ul style="list-style-type: none"> • ___ faces • ___ edges • ___ vertices 	<p>c. </p> <ul style="list-style-type: none"> • ___ faces • ___ edges • ___ vertices 	<p>d. </p> <ul style="list-style-type: none"> • ___ faces • ___ edges • ___ vertices
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2. Label the following using the words: surface (face), edge and vertex. Also say which geometric object each one will form.

<p>a. </p> <p>Geometric object: _____</p> <ul style="list-style-type: none"> • ___ edges • ___ vertices • ___ faces 	<p>b. </p> <p>Geometric object: _____</p> <ul style="list-style-type: none"> • ___ edges • ___ vertices • ___ faces 	<p>c. </p> <p>Geometric object: _____</p> <ul style="list-style-type: none"> • ___ edges • ___ vertices • ___ faces 	<p>d. </p> <p>Geometric object: _____</p> <ul style="list-style-type: none"> • ___ edges • ___ vertices • ___ faces
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3. Look at these skeletons. Say how many vertices and edges you see in each structure.

4.

<p>a. </p> <p>___ vertices ___ edges</p>	<p>b. </p> <p>___ vertices ___ edges</p>	<p>c. </p> <p>___ vertices ___ edges</p>
<p>d. </p> <p>___ vertices ___ edges</p>	<p>e. </p> <p>___ vertices ___ edges</p>	<p>f. </p> <p>___ vertices ___ edges</p>

