South Sudan

PRIMARY 2

Mathematics

Pupil's Book 2

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FOREWORD

I am delighted to present to you this textbook, which is developed by the Ministry of General Education and Instruction based on the new South Sudan National Curriculum. The National Curriculum is a learner-centered curriculum that aims to meet the needs and aspirations of the new nation. In particular, it aims to develop (a) Good citizens; (b) successful lifelong learners; (c) creative, active and productive individuals; and (d) Environmentally responsible members of our society. This textbook, like many others, has been designed to contribute to achievement of these noble aims. It has been revised thoroughly by our Subject Panels, is deemed to be fit for the purpose and has been recommended to me for approval. Therefore, I hereby grant my approval. This textbook shall be used to facilitate learning for learners in all schools of the Republic of South Sudan, except international schools, with effect from 4th February, 2019.

I am deeply grateful to the staff of the Ministry of General Education and Instruction, especially Mr Michael Lopuke Lotyam Longolio, the Undersecretary of the Ministry, the staff of the Curriculum Development Centre, under the supervision of Mr Omot Okony Olok, the Director General for Quality Assurance and Standards, the Subject Panelists, the Curriculum Foundation (UK), under the able leadership of Dr Brian Male, for providing professional guidance throughout the process of the development of National Curriculum and school textbooks for the Republic of South Sudan since 2013. I wish to thank UNICEF South Sudan for managing the project funded by the Global Partnership in Education so well and funding the development of the National Curriculum and the new textbooks. I am equally grateful for the support provided by Mr Tony Calderbank, the former Country Director of the British Council, South Sudan; Sir Richard Arden, Senior Education Advisor of DfID, South Sudan. I thank Longhorn and Mountain Top publishers in Kenya for working closely with the Ministry, the Subject Panels, UNICEF and the Curriculum Foundation UK to write the new textbooks. Finally, I thank the former Ministers of Education, Hon. Joseph Ukel Abango and Hon. Dr John Gai Nyuot Yoh, for supporting me, in my previous role as the Undersecretary of the Ministry, to lead the Technical Committee to develop and complete the consultations on the new National Curriculum Framework by 29 November 2013.

The Ministry of General Education and Instruction, Republic of South Sudan, is most grateful to all these key stakeholders for their overwhelming support to the design and development of this historic South Sudan National Curriculum. This historic reform in South Sudan's education system is intended to benefit the people of South Sudan, especially the children and youth and the future generations. It shall enhance the quality of education in the country to promote peace, justice, liberty and prosperity for all. I urge all Teachers to put this textbook to good use.

May God bless South Sudan. May He help our Teachers to inspire, educate and transform the lives of all the children and youth of South Sudan.

Deng Deng Hoc Yai, (Hon.)

Minister of General Education and Instruction, Republic of South Sudan

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UNIT 1: NUMBERS

1.1 Reading 3 digit numbers

Activity 1

In pairs, read the numbers you can see in the pictures below. What do they mean?

Activity 2

In pairs, read the following numbers.

110	120	130	140	150	160	170	180	190	200
210	220	230	240	250	260	270	280	290	300
310	320	330	340	350	360	370	380	390	400
410	420	430	440	450	460	470	480	490	500
510	520	530	540	550	560	570	580	590	600
610	620	630	640	650	660	670	680	690	700
710	720	730	740	750	760	770	780	790	800
810	820	830	840	850	860	870	880	890	900
910	920	930	940	950	960	970	980	990	991
992	993	994	995	996	997	998	999		

1. What do you notice?

2. What are you counting in?

Activity 3

In pairs, say the missing numbers.

130				134					139
250						256			259
320		322							329
440					445				449
560			563						569
610								618	
780									789
870							877		
990									999
515			518		520		522		524
926		928				932			935
237				241				245	
619			622						628
425					430				434

Activity 4

Read these number names. Work in pairs.

a) Twelve
b) Thirteen
c) Seventeen
d) Twenty-six
e) Thirty-four
f) Forty-seven
g) Fifty-one
h) Sixty-six
i) Ninety-seven
j) Eighty-two

1.2 Writing 3 digit numbers

Activity 1

In pairs, write the number.

a) Two hundred and fifty-four
b) Three hundred and forty-one
c) Five hundred and thirteen
d) Six hundred and seventy-one
e) One hundred and twenty-three
f) Four hundred and seventy-six
g) Seven hundred and twenty-two
h) Nine hundred and twelve
i) Eight hundred and thirty-four

Activity 2

Read and write in words in your exercise book. Work in pairs.

a) 27
b) 34
c) 76
d) 91
e) 53
f) 68
g) 59
h) 48
i) 14
j) 85

Activity 3

Read and write the numbers in words. Work in pairs.

a) 216
b) 942
c) 371
d) 415
e) 693
f) 621
g) 512
h) 741

Activity 4

Copy, read the number name and match with the correct number symbol. Work individually.

One hundred	800
Four hundred	200
Six hundred	300
Two hundred	500
Eight hundred	900
Five hundred	700
Three hundred	600
Nine hundred	400
Seven hundred	100

1.3 Ordering numbers

Activity 1: Work in pairs.

1. **Arrange the numbers from the smallest to the largest.**
   a) 4, 6, 2, 3, 7, 10, 23, 5
   b) 13, 79, 46, 32, 102, 314
   c) 400, 200, 600, 900, 100, 300, 500,
   d) 830, 340, 513, 570, 215, 184

2. **Write the numbers missing in the following sequence.**
   a) 100, _____, 102, 103, _____, 105, _____.
   b) 210, _____, 212, _____, _____, 215
   c) 350, 351, _____, _____, 354, _____, 356
   d) 444, _____, 446, 447, _____, _____
   e) 596, _____, 598, _____, 600, 601, _____

3. **Write the next five numbers in the following sequence.**
   a) 970, 971, 972, 973, ____, _____, ____, ____, _____.
   b) 777, 778, 779, _____, ____, _____, _____, _____.
   c) 640, 641, _____, _____, _____, _____, _____.
   d) 888, 889, _____, _____, _____, ____, _____
   e) 300, 350, 400, _____, _____, ____, ____, ____

4. **Write these numbers from the smallest to the largest.**
   932 427 16 4 23 271

5. Write these numbers from the largest to the smallest.

402 204 871 13 112 316 9

6. Circle the smallest number in each of the following.

a) 110	42	250	12	300
b) 567	704	648	900	130
c) 305	478	500	220	700
d) 352	147	526	190	999
e) 905	840	492	570	955

7. Which one is greater?

a) 150 or 900
b) 915 or 205
c) 500 or 100
d) 400 or 660
e) 250 or 70
f) 325 or 700

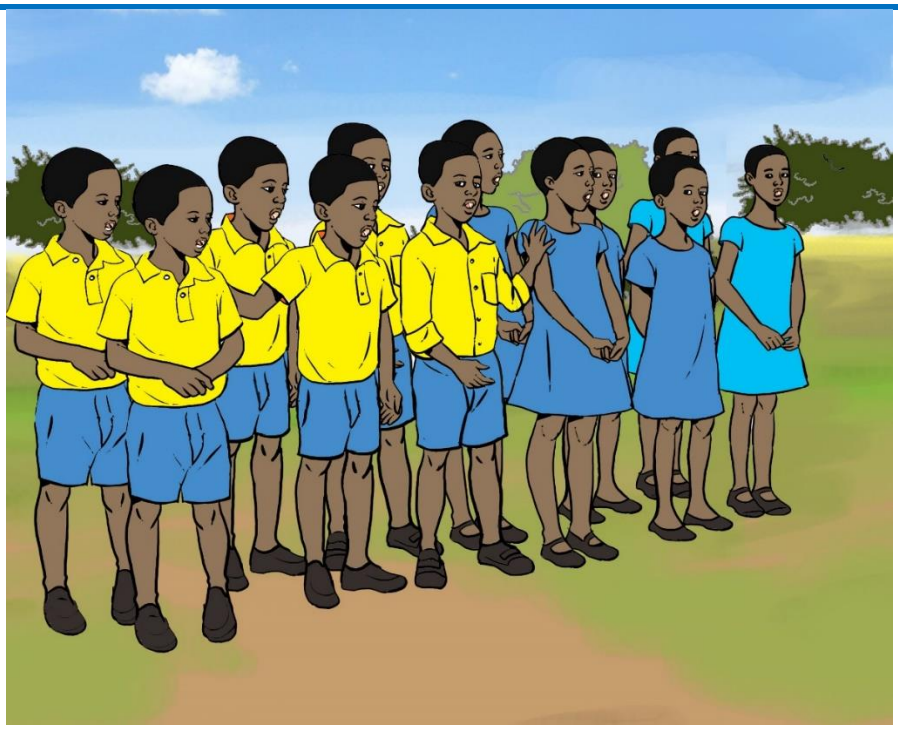
8. Study the table below, ask your classmate if they understand the numbers and answer the questions that follow.

658	350	470
824	176	629
217	962	708
579	309	156

a) State a number that is between 300 and 350. How did you know?
b) State all the numbers which are even. How did you know?
c) State all the numbers that are odd. How did you know?
d) State the numbers which are less than 200. How did you know?
e) State a number that is above 500. How did you know?

1.4 Addition & subtraction by using number line

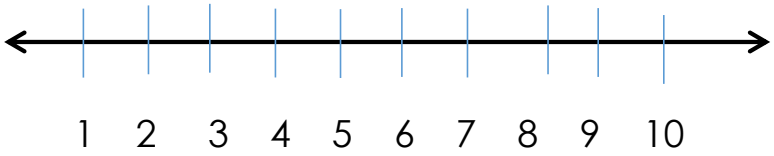
Activity 1: Whole class activity.



Go outside. Stand in a straight line to form a number line.

Activity 2: Work in groups.

Draw a straight line and number it as shown below.



The line drawn above is called **number line.**

Start at number four and count two steps to the right.

Where do you stop**? At number 6.**

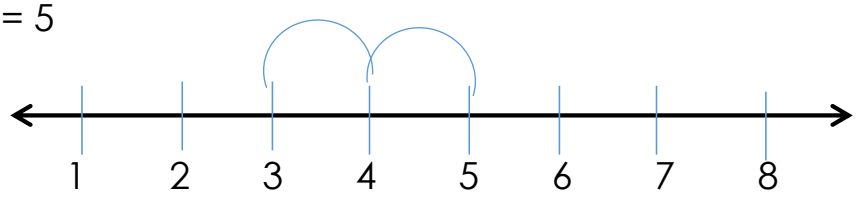
4 +2 steps = 6

Start again at number seven. And count 4 steps to the left. Where do you stop? **At number 7-4 =3**

Activity 2: Work in pairs.

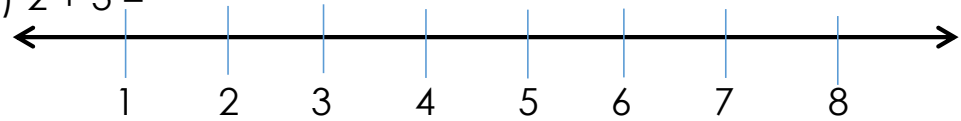
Add these numbers using a number line.

a) 3 + 2 = 5



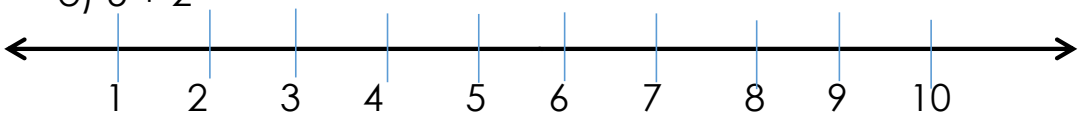
b) 4 +1=

c) 2 + 3 =



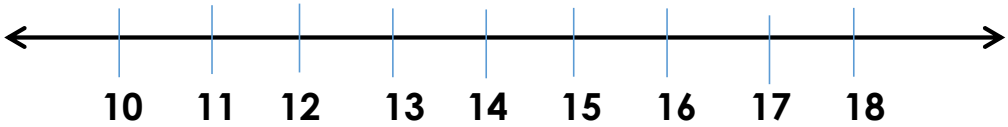
d) 6 + 2=

e) 5 + 2=



2. Add using number line

a) 10 + 4=14

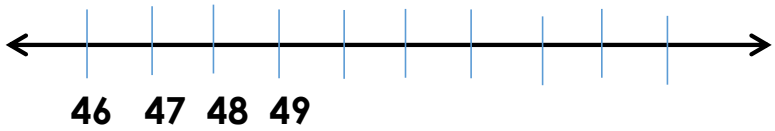


b) 21+ 3 =

c) 30 + 5 =

d) 52 + 6 =

e) 46 + 2 =



3. Add these numbers using a number line.

a) 120 + 4 =124

b) 130 + 3 =

c) 145 + 5 =

d) 160 + 7 =

4. Subtract using number line

a) 9 – 3 =6

b) 10 – 6 =

c) 7 – 2 =

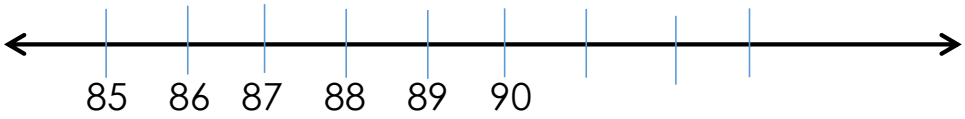
d) 5 – 4 =

5. Subtract

a) 20 – 5 =

b) 37 – 6 =

c) 90 – 4 =86



d) 16 – 2 =

e) 40 – 3 =

f) 77 – 7 =

g) 51 – 5 =

h) 44 – 4 =

6. Subtract using number line

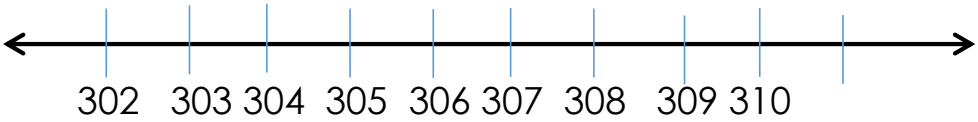
a) 142 – 7 =

b) 100 – 10 =

c) 115 – 5 =

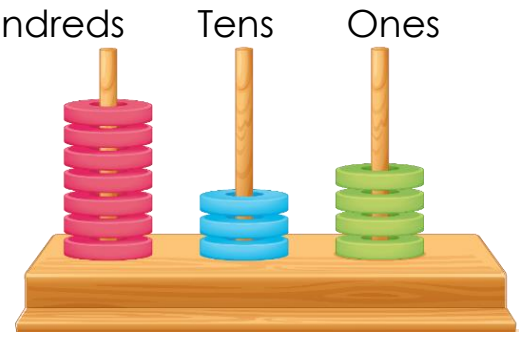
d) 230 – 6 =

e) 310 – 8 =



1.5 Place value

We can use the abacus to represent 734.



7 Hundreds 3 Tens 4 Ones

7 is the hundred place digit
So, the place value of 7 = 7 hundred or 700
3 is the tens place digit
So, the place value of 3 = 3 tens or 30
4 is the ones place digit
So, the place value of 4 = 4 ones or 4

We can also use bottle tops to represent the place value of the same number. In groups, collect bottle tops. Arrange them to show the place value of 734.

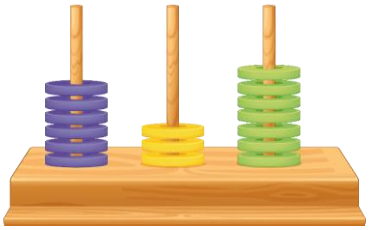
Example

349

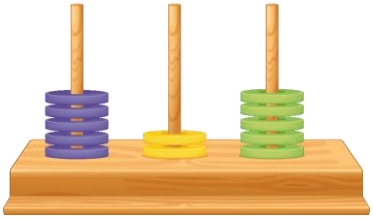
Number	place value
3	Hundreds
4	Tens
9	Ones

In pairs, collect locally available objects and use them to make an abacus. Use it to write the numbers in the abacus below.

Hundreds Tens Ones



Hundreds Tens Ones



Activity 1

Complete the following table. Work in pairs.

number	hundreds	tens	ones
634			
271			
304			
529			
613			
473			
791			
358			
890			

Activity 2

Give the place value of the number in bold. Work in pairs.

a) 3**2**1=Tens
b) 63**2**
c) **4**23
d) 2**1**6
e) 57**2**
f) 7**3**6
g) **9**14

Activity 3: Work in pairs.

What is the place value of each digit?

1. **92** =_____tens _____ones
2. **908** =_____hundreds _____ tens _____ ones
3. **80** =_____hundreds _____ tens _____ ones
4. **115** =_____hundreds _____ tens _____ ones
5. **3** =_____hundreds _____ tens _____ ones
6. **500** =_____hundreds _____ tens _____ ones

Activity 4

In groups, determine the place value of digit 5 in these numbers.

a) **205**_____
b) **571**_____
c) **795**_____
d) **245**_____
e) **965**_____
f) **592**_____
g) **856**_____
h) **625**_____
i) **517**_____
j) **215**_____

Activity 5: Work in groups

1. Write the place value of the underlined digit in these numbers. Explain how you got the answer.
   a) **1<u>6</u>4**
   b) **27<u>0</u>**
   c) **9<u>1</u>2**
   d) **7<u>9</u>1**
   e) **10<u>0</u>**
   f) **2<u>8</u>8**
   g) **17<u>9</u>**
   h) **21<u>9</u>**
   i) **<u>8</u>12**

2. Write the digit that represents place value of ones in these numbers. Explain how you got the answer.
   a) **47**
   b) **940**
   c) **69**
   d) **881**
   e) **99**
   f) **510**
   g) **451**
   h) **172**

3. Write the digit that represents place value of tens in these numbers. Explain how you got the answer.
   a) **174** _____
   b) **696** _____
   c) **21** _____
   d) **265** _____
   e) **100** _____
   f) **219** _____

4. Write the digit that represents place value of hundreds in these numbers. Explain.
   a) **605** _____
   b) **261** _____
   c) **805** _____
   d) **206** _____
   e) **989** _____
   f) **999** _____

1.6 Addition of numbers up to 3 digits

Activity 1

In pairs, study the examples below.

Add 13 and 24

Step1. Place the number as shown below (one below the other).

	T	O
	1	3
+	2	4

Step2. Add the ones

	T	O
	1	3
+	2	4
		7

3 ones and 4 ones make 7 ones

Step3. Add the tens

	T	O
	1	3
+	2	4
	3	7

1 tens and 2 tens make 3 tens

Add 26 + 37

1. Re-arrange the numbers as shown below.

$$\begin{array}{r} 26 \\ +\ 37 \\ \hline \\ \hline \end{array}$$

2. Add the ones digits.

$$6 + 7 = 13$$

3. Write 3 which represent the ones digit in the space just below 6 and 7.
4. Carry forward 1 from 13 because it represents the tens digits.
5. Add 1 which is a tens digit to the other 6 is a tens digit, write it directly below the other tens digit 2 and 3.

The answer to 26 + 37 is therefore **63**.

26 + 37 = 63

384 + 208

1. Re-arrange the numbers.

$$\begin{array}{r} 384 \\ +208 \\ \hline \\ \hline \end{array}$$

2. Add the ones digit 4+8=12
3. Write 2 which is the ones digit and carry 1 forward.
4. Add 1+8+0=0
5. Add 3+2=5

384 + 208 = 592

Activity 2

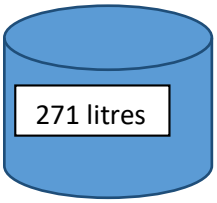
In pairs, work out.

a) 241 +12 =
b) 319 +23 =
c) 472 +42 =
d) 615 + 236 =
e) 927 +26 =
f) 629 +241 =
g) 328 + 207 =
h) 417 + 234 =
i) 632 + 194 =
j) 184 + 341 =
k) 376 + 293 =

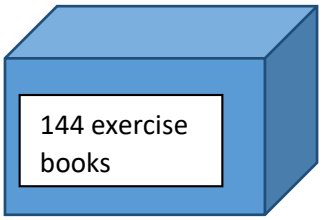
Activity 3

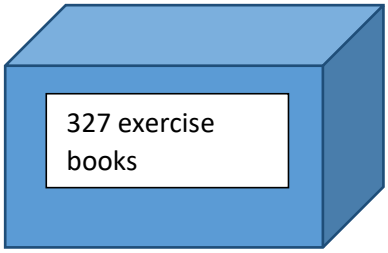
Word problems. Solve in groups.

1. John has 300 mangoes. Jane has 415 mangoes. How many mangoes do they have all together?
2. A container carries 415 litres of water. Another container carries 271 litres of water. How many litres of water can both of them carry together?



3. Deng has SSP 512. Elizabeth has SSP 269 how many pounds do they have all together?
4. A box has 144 exercise books. Another box has 327 exercise books. How many books are there all together?





5. A school has 436 pupils. Another school has 481 pupils. How many pupils are there all together?
6. A primary school has 372 boys and 263 girls. How many boys and girls are there all together?

1.7 Subtraction of numbers up to 3 digits without borrowing

Activity 1

Subtract. Work in groups.

a) 74 – 42 =
b) 43 – 20 =
c) 327 – 16 =
d) 459 – 42 =
e) 871 – 620 =
f) 576 – 321 =
g) 437 – 215 =
h) 691 – 471 =
i) 784 – 243 =
j) 634 – 231 =
k) 568 – 327 =
l) 972 – 341 =

Activity 2

Word problems. Solve in groups.

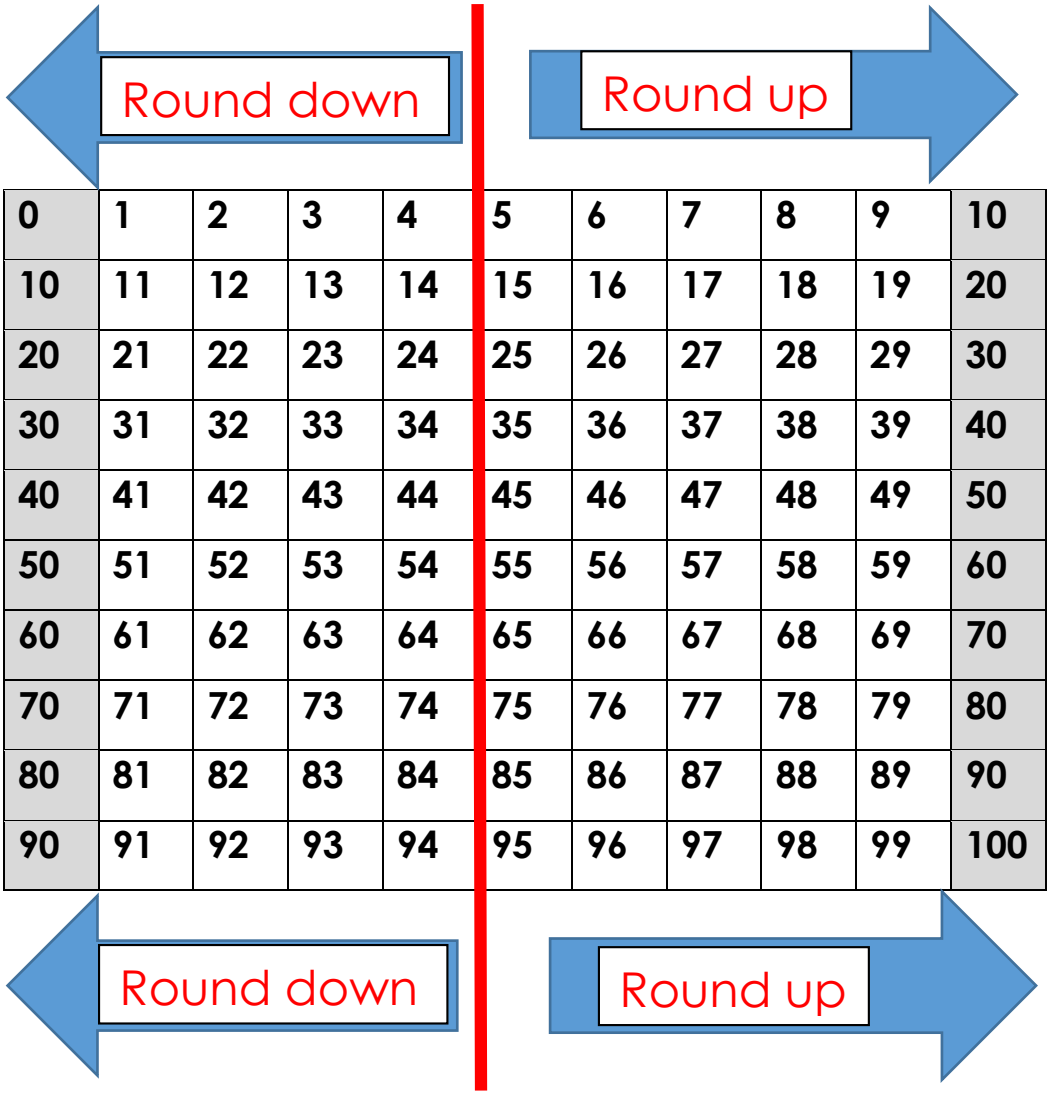
1. Subtract 23 from 69
2. Subtract 231 from 578
3. Subtract 615 from 927
4. What is 764 take away 512?
5. Take away 613 from 927
6. Jacob had 688 South Sudanese Pounds. He used 420 pounds. How many pounds did he remain with?
7. Joseph had 370 chicken. He sold 220 chicken. How many chicken did he remain with?
8. There are 750 pupils in a school. 320 are boys. How many girls are there?

1.8 Rounding off

Activity 1

In pairs, study the following chart. What can you note from the table?

Rounding Chart



0	1	2	3	4	5	6	7	8	9	10
10	11	12	13	14	15	16	17	18	19	20
20	21	22	23	24	25	26	27	28	29	30
30	31	32	33	34	35	36	37	38	39	40
40	41	42	43	44	45	46	47	48	49	50
50	51	52	53	54	55	56	57	58	59	60
60	61	62	63	64	65	66	67	68	69	70
70	71	72	73	74	75	76	77	78	79	80
80	81	82	83	84	85	86	87	88	89	90
90	91	92	93	94	95	96	97	98	99	100

Example

1. Round off 324 to the nearest tens

Check whether the ones digit is greater or less than 5. In this case it is less than 5. It will not affect the tens digit. Make the ones digit equal to zero.
The answer is 320.Round off 236 to the nearest tens
Again check whether the ones digit is greater or less than 5. It is greater than 5 therefore it will affect the tens digit. Add one to the tens digit to get 1+3=4
The answer IS 240.

2. Round off 361 to the nearest hundreds
   The answer is 400.

3. Round off 532 to the nearest hundreds
   The answer is 500.

Activity 1: Complete in groups.

1. Round off the following numbers to the nearest tens.
   a) 314
   b) 327
   c) 476
   d) 512
   e) 638
   f) 761

2. Round off the following to the nearest hundreds.
   a) 365
   b) 413
   c) 271
   d) 738
   e) 619
   f) 534
   g) 473
   h) 657

1.9 Multiplication

Count these sticks.

/// /// /// ///

3 3 3 3

3 +3 +3+ 3 = 12

How many groups of 3 are there?

There are 4 groups of 3 sticks in each group. This can be written as 4 X 3 = 12

Activity 1

Count and write the numbers.

1 + 1 + 1 =

3 × 1= 3

1) ///// ///// /////

5 + 5 + 5 =

3 × 5 =

2) /// /// /// ///

3 + 3 + 3 + 3 =

4 × 3 =

3) ///// ///// ///// /////

5 + 5 + 5 + 5 =

4 × 5 =

4) /// /// /// /// ///

3 + 3 + 3 + 3 + 3 =

5 × 3=

5) ///// ///// ///// ///// /////

5 + 5 + 5 + 5 + 5 =

5 × 5=

6) // // // // //

2 + 2 + 2 + 2 + 2 =

5 × 2=

Write repeated addition sentences as multiplication

Example

2 + 2 + 2 + 2

Can also be written as 4 X 2= 8

Arranged in groups of 3, 4, and 5 in a certain number of time.

Activity 2: Work in pairs.

Copy and fill in the missing numbers and 'X'.

1) 5 + 5 + 5
___ X 5 =

2) 3 + 3 + 3 + 3 + 3
____ ___ 3 =

3) 4+ 4+ 4
3 X ___ =

4) 2+ 2+2
___ X 2 =

5) 1 +1 +1 +1+1
5 __ ___= ___

6) 5 +5
2 X ___ =___

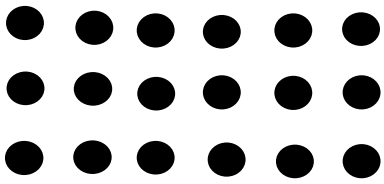
7) 4+ 4
___ X ___= 8

8) 2 +2+2+2+2
___ X 2 = ___

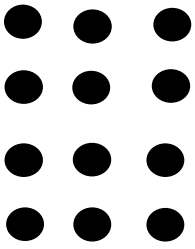
9) 4 +4 +4 +4 +4
___ ___ ___=20

Example

3 X6=18



4X3=12



Activity 3: Individually.

Copy and fill the multiplication table in your exercise book.

x	1	2	3	4	5	6	7	8	9	10
1										
2										
3			9							
4										

5					25					
6										
7										
8										80
9					45					
10										100

Activity 4: Complete in groups.

Multiply

1 × 5 =	1 × 6 =	1 × 7 =
2 × 5 =	2 × 6 =	2 × 7 =
3 × 5 =	3 × 6 =	3 × 7 =
4 × 5 =	4 × 6 =	4 × 7 =
5 × 5 =	5 × 6 =	5 × 7 =
6 × 5 =	6 × 6 =	6 × 7 =
7 × 5 =	7 × 6 =	7 × 7 =
8 × 5 =	8 × 6 =	8 × 7 =
9 × 5 =	9 × 6 =	9 × 7 =
10 × 5 =	10 × 6 =	10 × 7 =

1 x 8 =	1 × 9 =	1 ×10 =
2 × 8 =	2 × 9 =	2 × 10 =
3 × 8 =	3 × 9 =	3 × 10 =
4 × 8 =	4 × 9 =	4 × 10 =
5 × 8 =	5 × 9 =	5 × 10 =
6 × 8 =	6 × 9 =	6 × 10 =
7 × 8 =	7× 9 =	7 × 10 =
8 × 8 =	8 × 9 =	8 × 10=
9 × 8 =	9 × 9 =	9 ×10 =
10 × 8 =	10 × 9 =	10 ×10 =

How did you work it out? Explain your answer to your partner.

Activity 5

Word problems. Work in pairs.

How did you work it out? Explain your answer to your partner how you worked it out.

1. A seller had arranged 5 groups of 5 mangoes in each group. How many mangoes had the seller altogether?
2. In a class learners sit in 3's on a desk. How many learners would sit on 4 desks?
3. A farmer planted 4 rows of cabbage on his small garden. If he planted 5 cabbages on each row, how many cabbage did he plant altogether?
4. A floor is covered with 4 marts in a row and 4 marts in a column. How many mats had covered the floor?
5. A dog handler had 5 dogs. Each dog has 4 legs. How many legs do they have altogether?
6. A car has 4 wheels. How many wheels do 5 cars have?
7. A man eats 3 meals in a day. How many meals does the man eat in a week?

8. A box contains 10 pens. How many pens are there in 10 boxes?

9. A book costs 10 pounds. How many pounds will 6 books cost?

10. A bird has 2 legs. How many legs do 9 birds have?

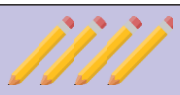
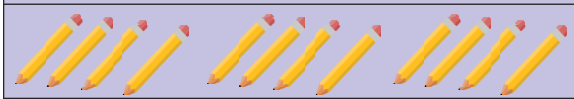
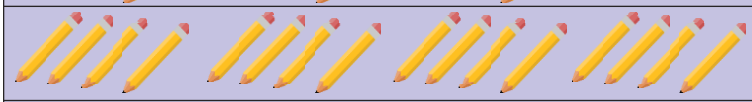
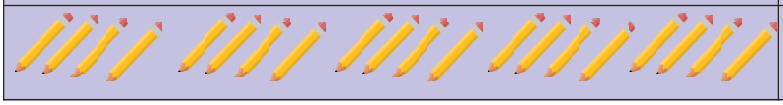
11. Dorothy is 10 years old. Dorothy's father is 3 times her age. How old is Dorothy's father?

12. The pupils will go on holidays for 4 weeks. How many days will the pupils be on holiday?

Activity 6

What is the answer? Work in pairs.

	3×1 =
	3×2 =
	3×3 =
	3×4 =
	3×5 =

	4×1 =
	4×2 =
	4×3 =
	4×4 =
	4×5 =

🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸	5×1 =
🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸 🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸	5×2 =
🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸 🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸 🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸	5×3 =
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🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸 🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸 🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸 🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸 🇺🇸🇺🇸🇺🇸🇺🇸🇺🇸	5×5 =

1.10 Division

Division is sharing.

Activity 1: Talk in pairs.

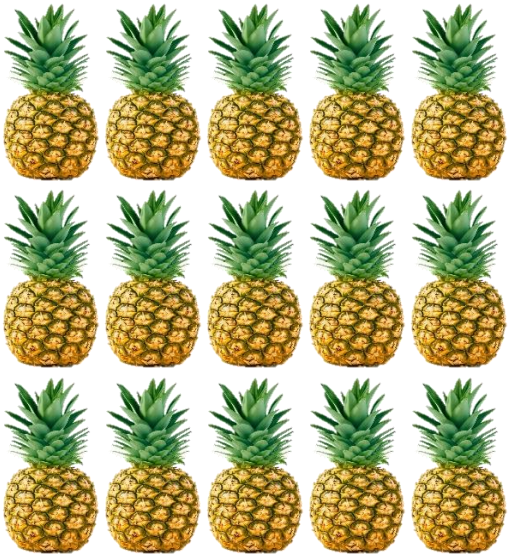
Look at the pictures below. What is happening?

Activity 2: Solve in groups.

1. Share 4 loaves of bread between 2 people. How many loaves of bread does each person get?
2. Share 8 pencils among 8 learners. How many pencils would each learner get?
3. Share 16 books among 8 groups. How many books would each group get?
4. Abdi shared 25 rulers equally among 5 classes. How many rulers did each class get?
5. Amunja share 20 pencils equally among his 4 friends how many pencils did each get?

Use '÷'sign in writing division sentences.

Fifteen pineapples shared among three people. Each person will get five pineapples.



This can also be written as $15 \div 3$

Activity 3: Work in pairs.

Write the division sentences in your book.

1. Share fifteen books among five people.
2. Share twelve oranges among six people equally.
3. Amos shared eighteen brooms among three classes equally.
4. Muasya had twenty five trees to be planted. Five learners were to plant them equally.
5. Kendi divided her twenty four apples equally among her four friends.

Activity 4: Work in groups.

1. Collect 10 books from pupils in your class. Share the books equally among 5 pupils. How many books will each pupil gate?

We can therefore say that $10 \div 5 = 2$

2. Collect 12 small sticks. Share the sticks equally among 4 pupils in the class. How many stick will each pupil get?

12 sticks

Pupil 1 pupil 2 pupil 3 pupil 4

We can therefore say that $12 \div 4 = 3$

Activity 5

1. **Divide: work in groups.**

a. $4 \div 2 =$
b. $8 \div 4 =$
c. $10 \div 2 =$
d. $10 \div 5 =$
e. $15 \div 3 =$
f. $15 \div 5 =$
g. $20 \div 2 =$
h. $20 \div 4 =$
i. $20 \div 5 =$
j. $20 \div 10 =$
k. $25 \div 5 =$
l. $30 \div 2 =$
m. $30 \div 5 =$
n. $30 \div 6 =$
o. $30 \div 10 =$
p. $40 \div 4 =$
q. $45 \div 5 =$
r. $50 \div 10 =$

Activity 6: Solve in groups.

1. The teacher will provide bananas for the class. For example if a group has 6 learners and the teacher

gives 24 bananas to the learners, how many will each learner get after dividing equally?

2. Go out and collect as many sticks as you can. If a group has 10 learners and they are given 100 sticks, how many does each get after dividing equally?
3. Collect pencils. A group has 5 learners and they are given 50 pencils, how many pencils will each learner have after dividing equally?
4. Collect books. A group has 5 learners and they are given 40 exercise books. How many will each learner get after sharing equally?
5. Collect blackboard chalk. A group has 8 learners and the teacher gives them 72 chalks. How many will each learner have after equal sharing?

Activity 7: Solve in groups.

Divide:

6 ÷3=	**9 ÷3 =**	**8 ÷ 4 =**	**12 ÷ 4 =**
24 ÷6=	**21 ÷3=**	**12 ÷3=**	**18 ÷3=**
8 ÷2=	**10÷5=**		

Divide:

2 $\overline{)4}$ =	**2 $\overline{)6}$ =**	**2 $\overline{)14}$ =**	**5 $\overline{)25}$ =**
4 $\overline{)16}$ =	**4 $\overline{)20}$ =**	**5 $\overline{)20}$ =**	**3 $\overline{)24}$ =**
3 $\overline{)9}$ =	**2 $\overline{)8}$ =**	**2 $\overline{)10}$ =**	**5 $\overline{)15}$ =**

Activity 8

Read and calculate. Work in groups.

1. Share 12 pens equally among 6 learners equally. How many pens does each learner get?

2. Janet shared 25 mangoes equally among her five friends. How many mangoes did each friend get?

3. Jacob had shared 12 books equally among 3 learners. How many books did each pupil get?

4. Abdi shared 15 brooms equally among 3 classes. How many brooms did each class get?

Activity 9: Work in groups.

Game involving division.

Divide	Answer
15 ÷ 3 =	15 divide by 3 is 5
18÷3 =	18 divide by 6 is 3
16 ÷4 =	16 divide by 4 is 4
15÷5 =	15 divide by 5 is 3

Copy the table and fill the answers for the following division sentences.

10÷5	_____
14÷2	_____
25÷5	_____
24÷3	_____
20÷5	_____
20÷4	_____

Choose from (5, 4, 4, 5, 8, 7, 2) to fill the spaces above.

Activity 10

Words problems. Work in groups.

1. A mother shared 20 oranges equally among her 4 children. How many did each get?
2. The headmaster shared 80 pencils among 8 classes. How many pencils did each class get?
3. A teacher shared 20 pounds among 5 pupils, how many pounds did each pupil get?
4. Carol bought 4 notebooks for 80 Sudanese pounds. What was the cost of each notebook?
5. Share 24 oranges equally among 6 children. How many does each get?
6. Divide 20 mangoes among 4 children. How many does each get?
7. David went to a day care near his house. He had 50 sweets and the day care has 10 children. How many sweets did each child get?

8. Our teacher has 100 pencils which are to be shared among 20 pupils. How many pencils will each pupil get?

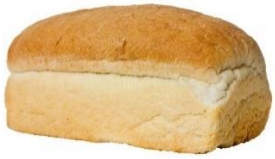
1.11 Fractions

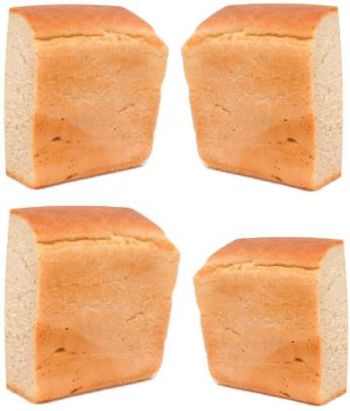
What is a fraction?

A fraction means a part of a whole. It shows one or more parts out of many equal parts.

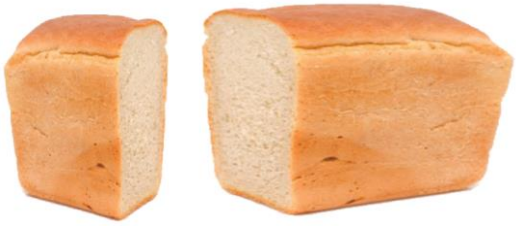
Activity 1

Deng ordered a loaf of bread for himself.

He sat down to eat.		This is a whole. It is denoted by 1.
How much do they get if a friend joins him?		This is a whole. It is denoted by $\frac{1}{2}$.
If a second friend joins them?		Each part is called one-third. It is denoted by $\frac{1}{3}$.

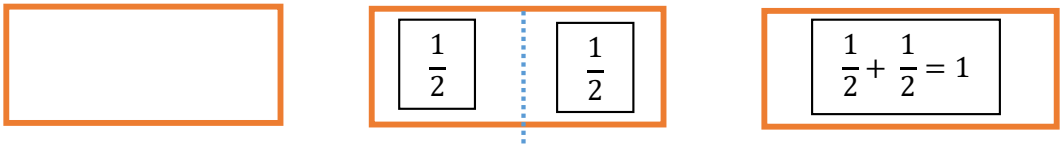
What if they get to four people?		Each part is called one-fourth. It is denoted by $\frac{1}{4}$.

Aban had a loaf of bread which she divided into 3 equal pieces, one for herself and one each for Asha and Halima. But Halima insisted on taking two pieces. Halima, therefore got 2 out 3 equal parts, which is expressed as two-thirds, or $\frac{2}{3}$ in the language of fractions.



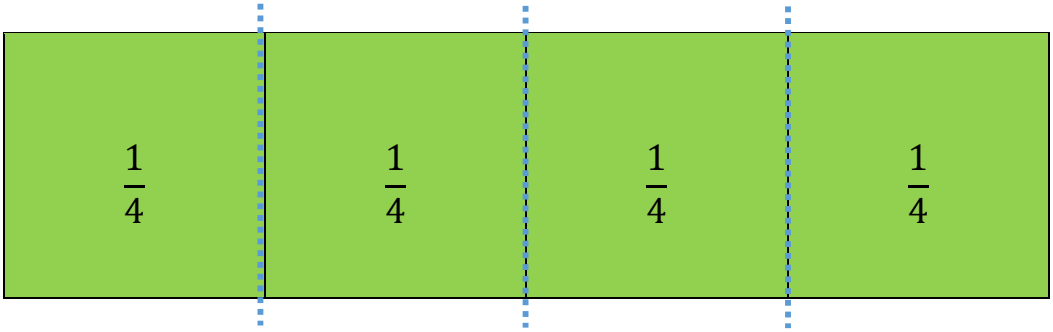
Activity 2

1. Take a rectangular sheet of paper. Fold it into two parts from the centre by making a crease. The crease divides the sheet of paper into two equal parts. Each part is called one-half of the whole.



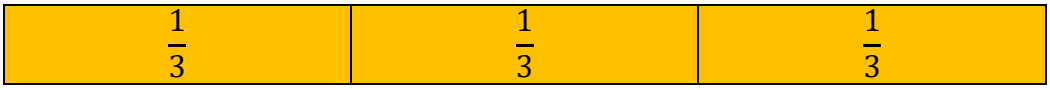
1 one-half

2. Fold the sheet into four equal parts, by first folding it into two equal parts and then folding each half again into two equal parts. Each part is called one-fourth or a quarter of the whole.



Note: If we consider three parts together, it will represent three-fourth of the whole $\frac{3}{4}$.Two one-fourth combined together equal a half.

3. Take another sheet and fold it into three equal parts.

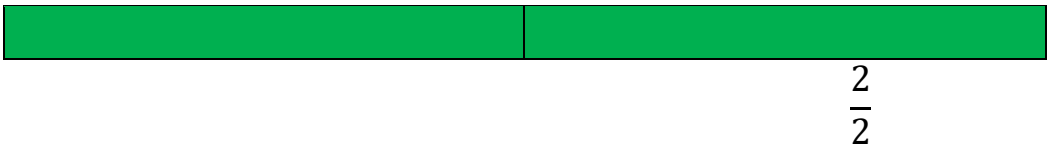


Each part is called one-third and is expressed as $\frac{1}{3}$ (read as one over three).

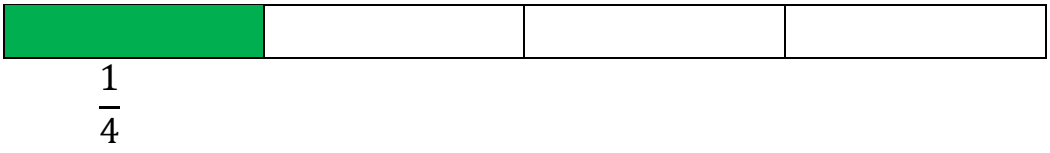
Halves and Quarters of a Whole Object

Look at the rectangular strips given below. The fraction representing the coloured part is given below each of them.

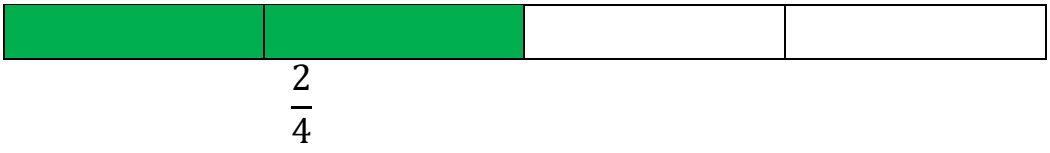
$\frac{1}{2}$



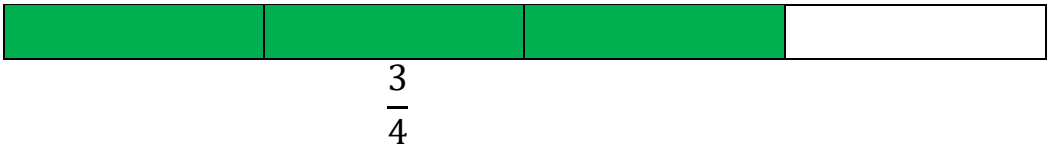
$\frac{2}{2}$



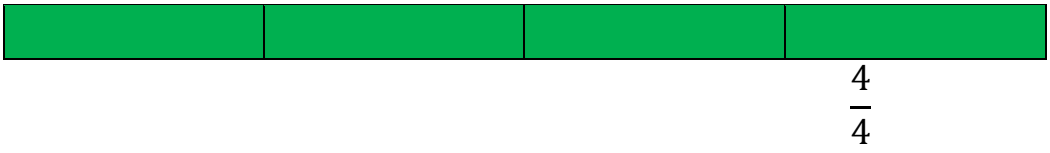
$\frac{1}{4}$



$\frac{2}{4}$



$\frac{3}{4}$



$\frac{4}{4}$

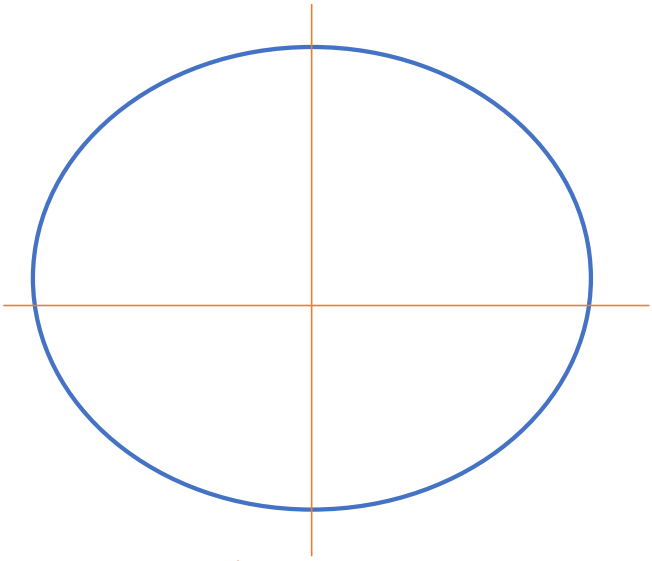
What do you observe?

a) _____ halves equal 1 _____ quarters equal 1

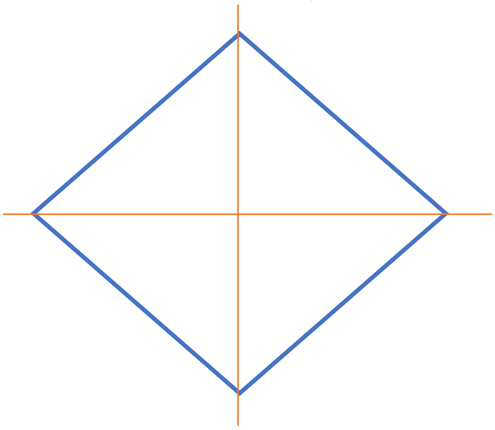
b) _____ quarters equal $\frac{1}{2}$ _____ quarters equal $\frac{3}{4}$

Activity 3

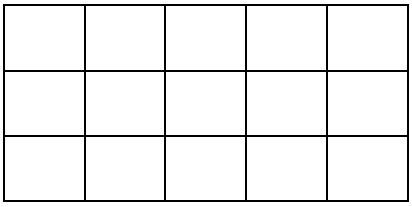
Copy and colour each of the following shapes given to show the fraction.



$\frac{2}{4}$



$\frac{3}{4}$



$\frac{9}{15}$

UNIT 2: MEASUREMENT

Length, mass and weight

2.1 Length

Measurement is a number that shows the size or amount of something.

Activity 1

1. Look at the picture below, what are they doing?

Discuss in groups.

Activity 2

In pairs, use sticks of equal length to measure different lengths. Copy and fill in the table in your exercise books.

Measure	Use sticks of equal lengths
Classroom: Length width	 _____sticks _____sticks
Cupboard Length width	 _____sticks _____sticks
Desk length	_____sticks
Distance from the flag post to the nearest class	_____sticks
Window Length width	 _____sticks _____sticks

Activity 3

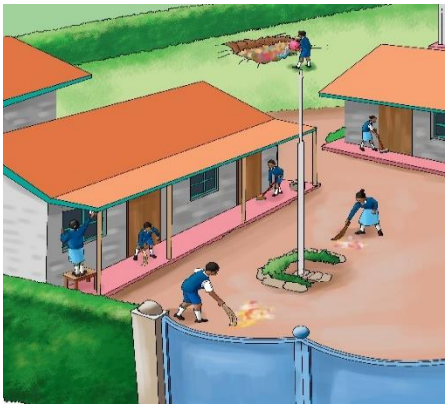
In groups, use sticks or strings of different lengths, 1m sticks and 1m ruler to measure the lengths of objects in the table below. Copy and complete the table in your exercise books.

Measure		Use sticks of different lengths (sticks)	Use 1m stick, or 1m ruler (m)
classroom	Length		
	Width		

cupboard	Length		
	width		
Door	Length		
	width		

Activity 4

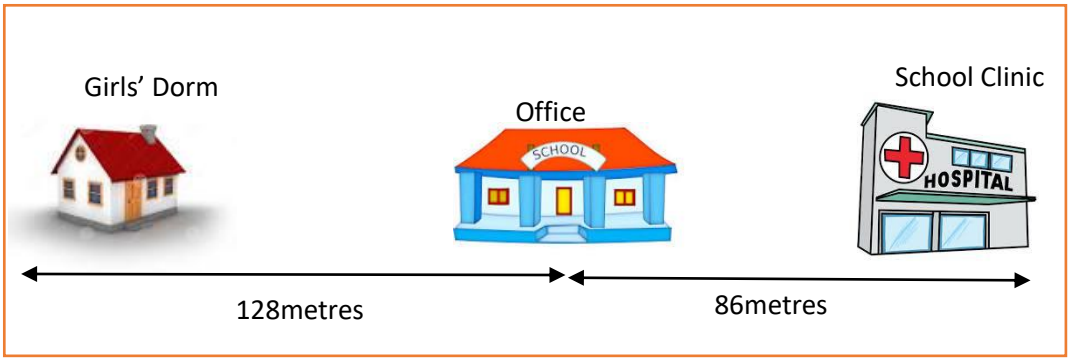
Using meter rule and tape measure, measure the following:

	
Distance from your classroom door to the next class.	The distance from your chair to the front of the class.

 The height of any four classmates.	 The distance from the door to your chair.

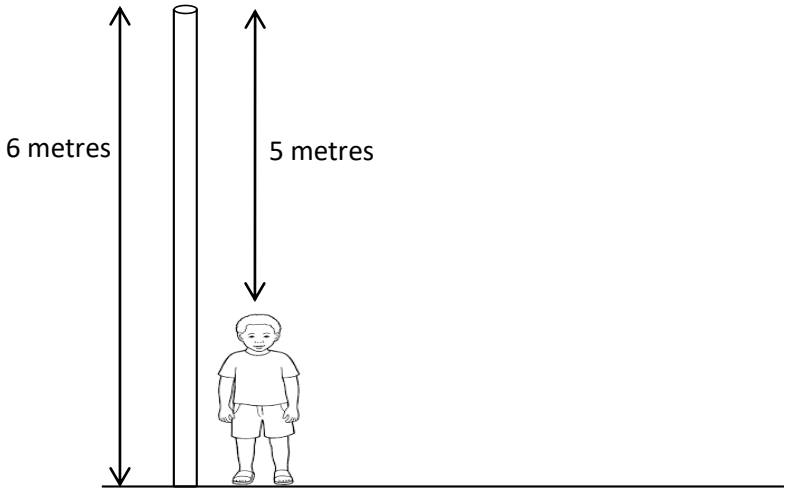
Activity 5: Work in groups.

Study the picture below and answer the questions that follow.



1. Jane walked from the girls' dorm to the school clinic and back to the headmaster's office. How many meters did she cover.
2. The school nurse walked from the headmaster's office to the girls' dorm and then walked back to the clinic. How many meters did she walk in total?

3. John is standing next to a flag post. What is John's height?



4. John walked round the school farm once. What length did he walk in total?

Activity 6

Work out the following in groups.

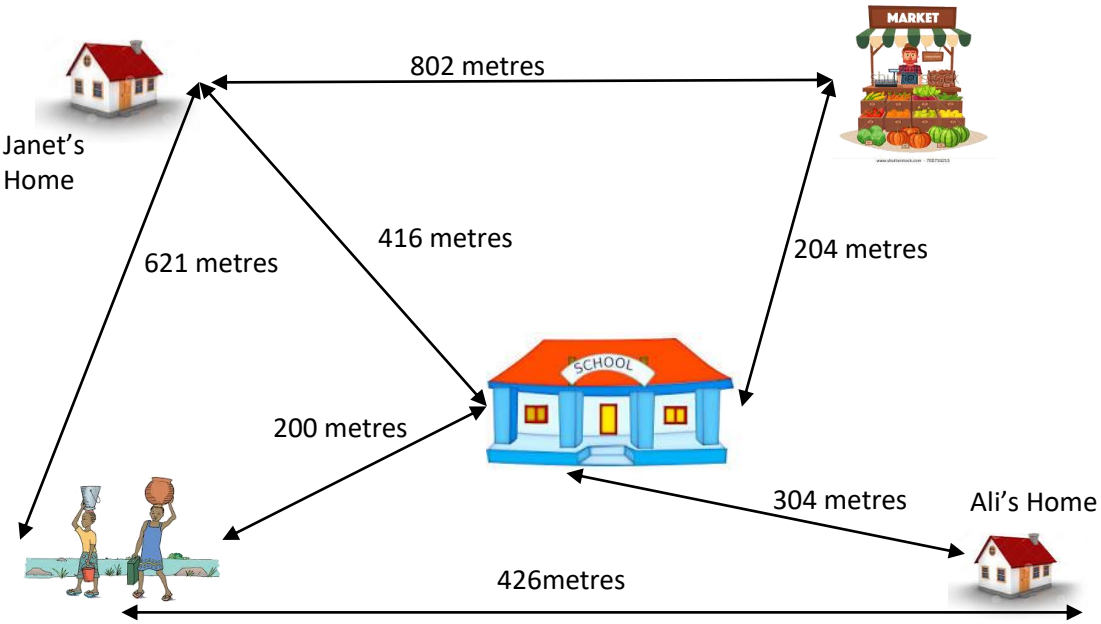
1. $426\ \text{m} + 51\text{m} =$
2. $202\ \text{m} + 31\ \text{m} =$
3. $41\ \text{m} + 621\ \text{m} =$

4. 589 m + 24 m =
5. 762 m + 34 m =
6. 17 m + 107 m =

Activity 7

Work out the following in groups.

Look at the picture below answer the questions that follow.



1. Janet walked from her home to Ali's home. How many metres did she walk?

2. If Ali walks from school to the river then home, how many metres does he cover?

3. Janet walks to school and back home every day. What distance does she cover?

2.2 Mass

Activity 1: Work in groups.

1. Collect some common objects like books, blackboard duster, chalk box, packet of sugar, packet of milk and a pencil bag.
2. Estimate the weight of these objects.
3. Find the weight of any of these objects using any of the scales.
4. Record your results.

Object	My estimate	Actual measurement
duster		
sharpener		
book		
Chalk box		

Example

Use a I kg container of soil to show heavier, lighter or same.

I kg soil

A cup of milk

I kg of soil is heavier than a cup.

Activity 2: Work in groups.

Use I kg container of soil to show heavier, lighter or same.
Record your observations in your exercise books.

1.

I kg soil

Small stone

2.

1kg soil

Text book

3.

A carton of books

1 kg of soil

4.

I kg of soil

A tin of soil

5.

I kg soil

A pair of shoes

6.

I kg soil

A ball

7.

Piece of metal

I kg of soil

8.

I kg soil

I kg cotton

9.

4. Which is heavier, 2 kg maize or 4 kg of beans?
5. Which is lighter, 3 kg of cotton or 2 kg maize floor?
6. Which is heavier, **1** kg piece of wood or **1** kg of feathers?

Activity 3

In groups, look at the picture and say what is happening.

2.3 Capacity

Activity 1

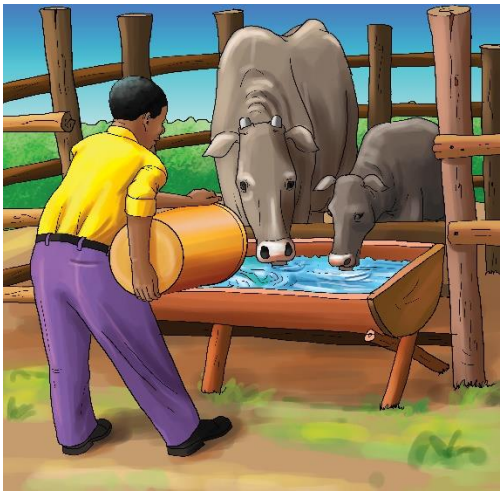
1. In groups, use a bottle to fill water into a bucket. How many full water bottles do you need to fill the bucket?
2. In groups, using a cup or a calabash, fill water into a bucket. How many full cups or calabashes do you need to fill the bucket?

In pairs, talk about the picture on the left.

Activity 2

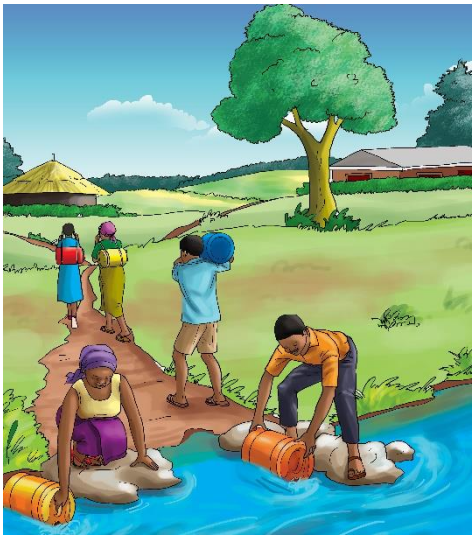
In groups, look at the following pictures and discuss the choice of the container used.

1.

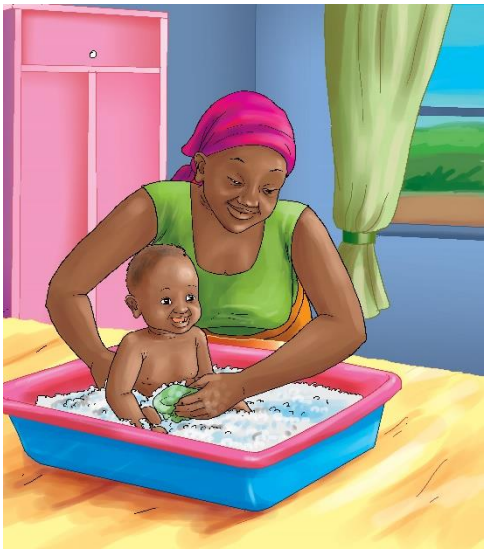


2.

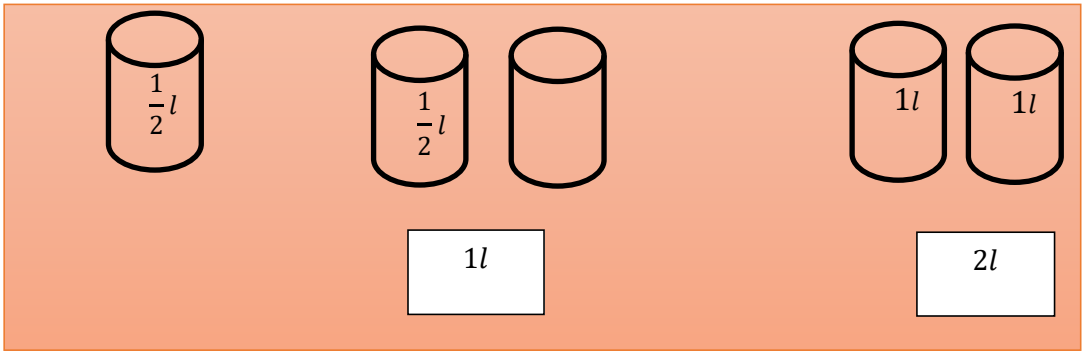
3.



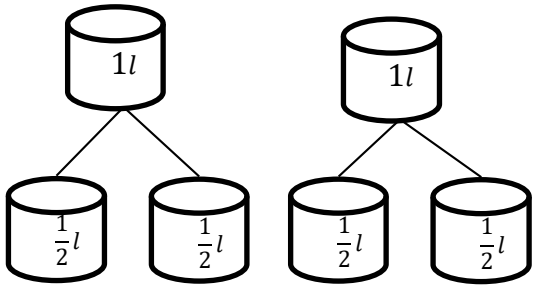
4.



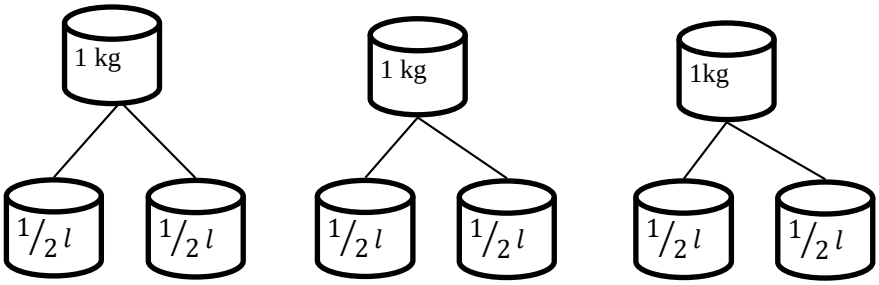
Activity 3



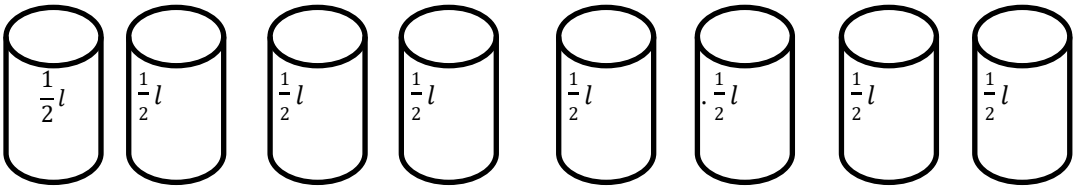
1. How many half litres are there in 2 litres?



2. How many half litres are in 3 litres?



3. How many litres does 8 half litres make?



4. Copy and complete the table below.

Litres	Half litres
1	2 half litres
3	6 half litres
	10 half litres
	14 half litres
6	
	20 half litres

Activity 4

In pairs, find out how many small containers can fill big containers.

Small containers	**Big containers**	**How many smaller containers were used to fill the big containers**
1litre container	5 litre container	
2 litre bottle	10 litre container	
3 litre bottle	15 litre container	
5 litre bottle	25 litre container	

10 litre container	30 litre container	
6 litre container	24 litre container	

Activity 5

Work out in groups.

1. $80\ half\ litres + 20\ half\ litres =$
2. $100\ half\ litres + 23\ half\ litres =$
3. $32\ half\ litres - 3\ half\ litres =$
4. $45\ \ half\ litres - 21\ half\ litres =$
5. $92 half\ litres + 22\ half\ litres =$
6. $21\ half\ litres - 3\ half\ litres =$
7. $16\ litres + 34\ litres =$
8. $30\ litres + 41\ litres =$
9. $51\ litres + 20\ litres =$
10. $50\ litres - 27\ litres =$
11. $100\ litres - 33\ litres =$
12. Mr. Bongo bought 7 litres of milk. He used 2 litres in the morning and 1 litre at lunch time. How many litres was he left with?
13. Janet used a 3 litre bucket to draw water from a well. Her pot was filled with three buckets of water. How many litres is Janet's pot?
14. Lily carried two litres of water to school on Monday morning. On Tuesday she carried 3 litres. If she divided the water into half litre bottles, how many half-litre bottles did she have?

2.4 Money

Know your money

Front

Back

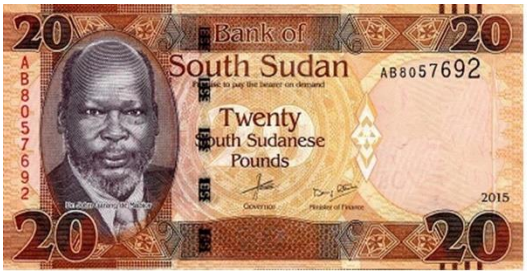
Front

Back

Front

Back

Front



Back

Front

Back

Front

Back

2.5 Giving change

Activity 1

Work in groups.
What do you see?

Activity 2

True or False. Work in pairs.

=

_____

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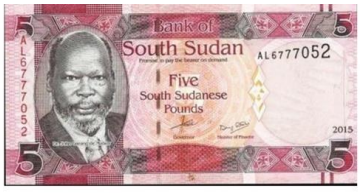

_____

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_____

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Activity 3

How much?


Bank of South Sudan
Five South Sudanese Pounds
Twenty South Sudanese Pounds
One South Sudanese Pound


Bank of South Sudan
One Hundred South Sudanese Pounds


Bank of South Sudan
Fifty South Sudanese Pounds


Bank of South Sudan
Twenty South Sudanese Pounds
Ten South Sudanese Piasters
One Hundred

Activity 4: Work in pairs.

1. How many one pound notes are in:
    a. a 20 pound note
    b. four 10 pound notes
2. How many fifty pound notes are in one hundred pound note?
3. How many five pound notes are in one hundred pound note?

2.6 Shop Price List

Trouser
SSP 650

Box
SSP 370

Blanket
SSP 460

School Bag
SSP 245

School Shoes
SSP 815

Dress
SSP 340

Mattress SSP 500

Activity 5: Work in groups.

1. Mary had SSP 450. She bought one dress. How much money was she left with?
2. I had SSP 500. I bought 1 box. How much was I left with?
3. Kambo had SSP 950. He bought 1 school shoe. How much was left?
4. How much do you need to buy one box, one blanket and a pair of school shoes?
5. Mrs. Keru went to the shop with SSP 2500. She bought one mattress, one box and one bag. How much was she left with?

2.7 Time

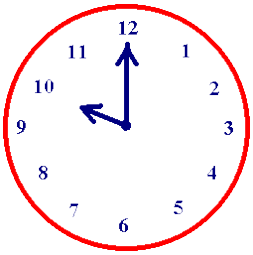
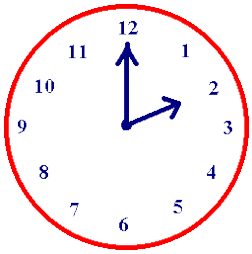
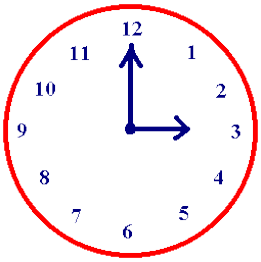
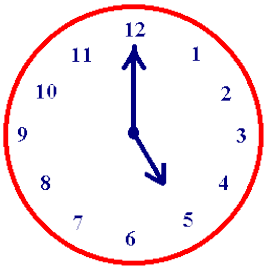
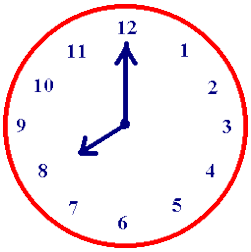
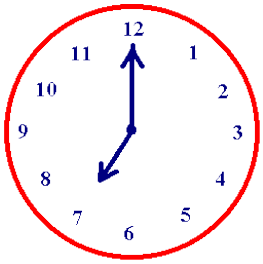
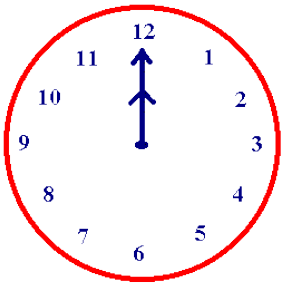
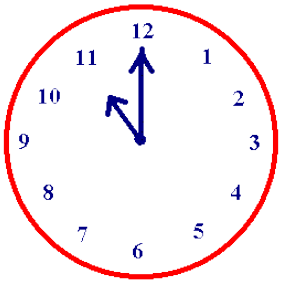
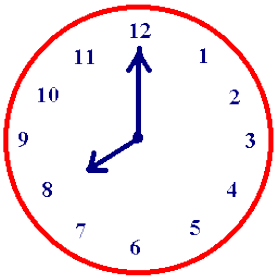
Know your time.

Activity 1

Look at the following pictures. What time do you think it is? Why? Talk in groups.

Activity 2

What is the time? Work in pairs.

1. 	2. 	3. 
4. 	5. 	6. 
7. 	8. 	9. 

Activity 3

Make clock faces to show the time below. Work in groups.

4. It is 4 o'clock
5. It is 7 o'clock
6. It is midday
7. It is 3 o'clock
8. It is 11 o'clock

2.8 Half past the hour

Look at the clock below.

What is the time? It is half past 5.

We use the expression half past the hour when we mean it is 30 minutes past the hour or thirty minutes before the next hour.

Activity 1

Using locally available materials, make or draw clock faces to show the following time. Work in groups.

1. Half past 4
2. Half past 6
3. Half past 11

4. Half past 8
5. Half past 5

2.9 Quarter past the hour and Quarter to the hour

As you already know, an hour has 60 minutes. Half of 60 is 30. Therefore, half past 3 means thirty minutes after 3 o'clock.

To get the quarter of 60 minutes, we divide 60 by 4. This gives us 15 minutes. When telling time, we use the expressions quarter past the hour or quarter to the hour. This means it is either fifteen minutes past the hour or fifteen minutes to the next hour. Therefore the minute hand is either pointing at 3 for quarter past the hour or 9 for quarter to the hour.

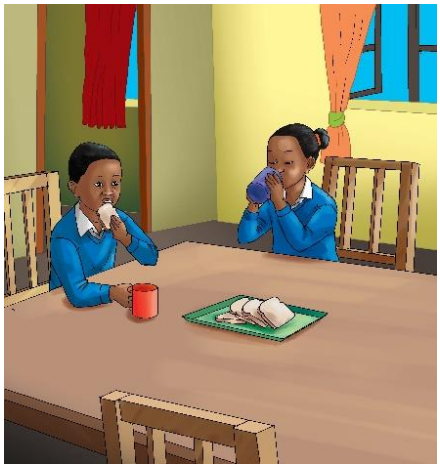
Activity 1

Make or draw clock faces using available local materials. Work in groups.

1. Quarter past 5
2. Quarter to 8
3. Quarter past 12
4. Quarter to 2
5. Quarter to 9
6. Quarter past 7
7. Quarter to 11
8. Quarter to 4
9. Quarter past 1
10. Quarter to 3

Activity 2

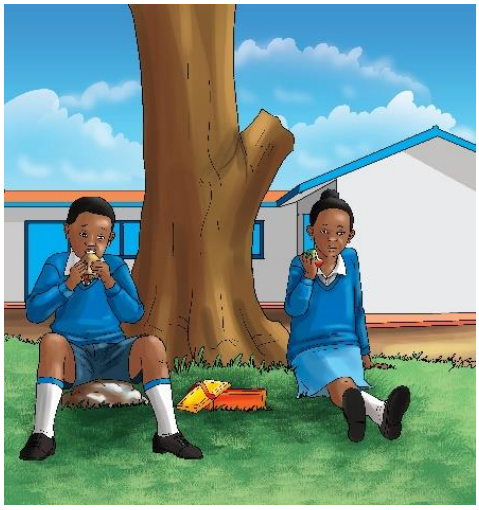
Talk in pairs. At what time to you do the following activities.

 Wake up.	 Have breakfast.

Start for school.

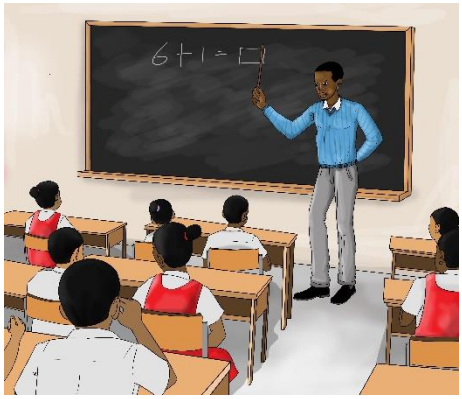
First lesson of the day.

Go for break.



Have lunch.

First lesson in the afternoon



Last lesson of the day.

Go home after school.

Go to bed.

Activity 3

In pairs, read the following time out loud.

1. 4:00
2. 3:30
3. 6:45
4. 7:00
5. 5:15
6. 9:45
7. 2:30
8. 12:00
9. 8:00
10. 1:30
11. 4:15
12. 2:30

UNIT 3: GEOMETRY

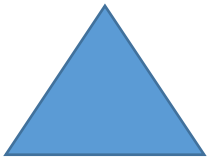
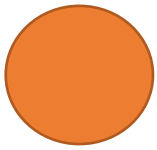
Geometry is part of mathematics that deals with points, lines, curves and surfaces.

3.1 Shapes

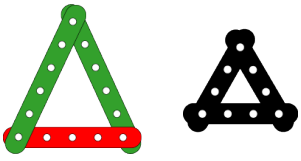
Activity 1

Look at the pictures below. What geometric shapes can you see? Talk in groups.

Activity 2: Work in pairs.

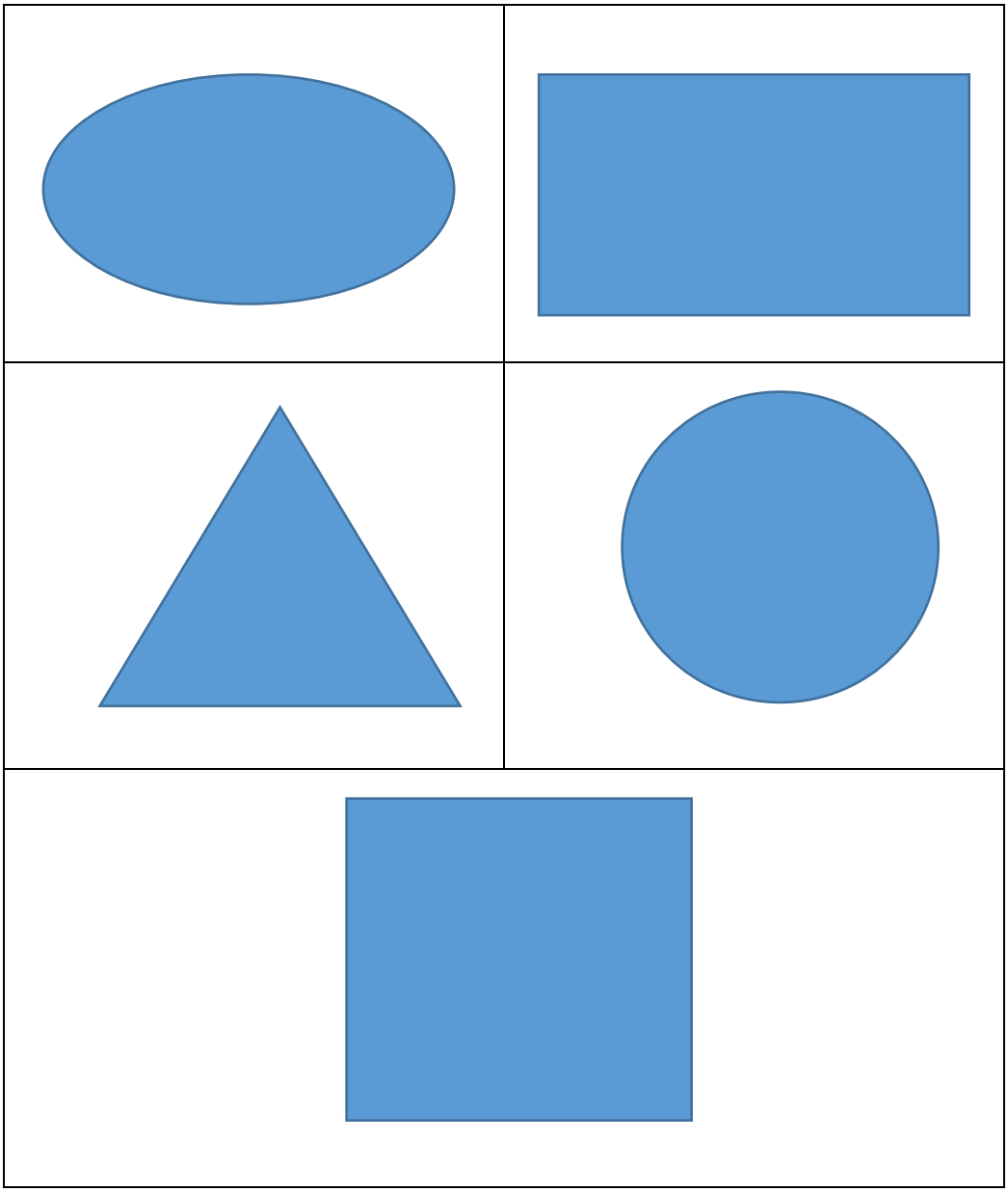
			
rectangle	triangle	circle	square

What shapes do you see in the pictures?

Activity 3: Work in pairs.

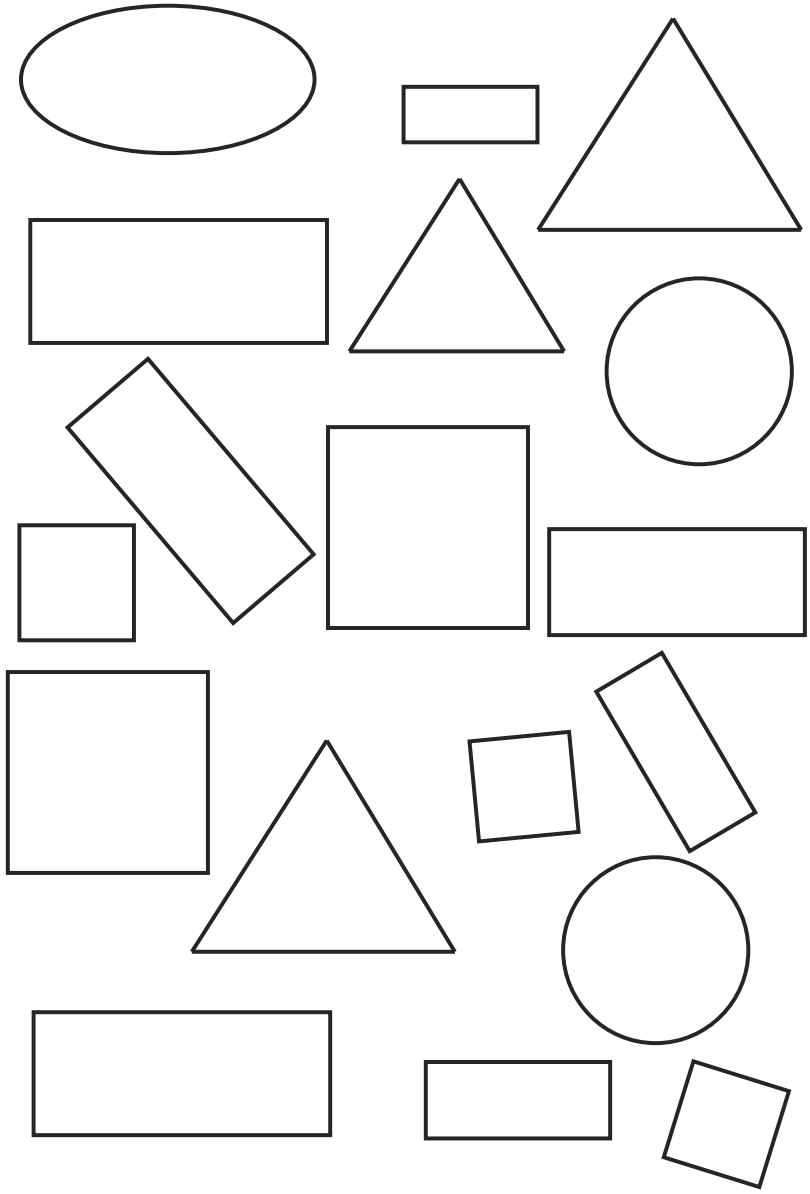
Draw and name these shapes.



Look around the classroom and point out different shapes.

Activity 4: Work in pairs.

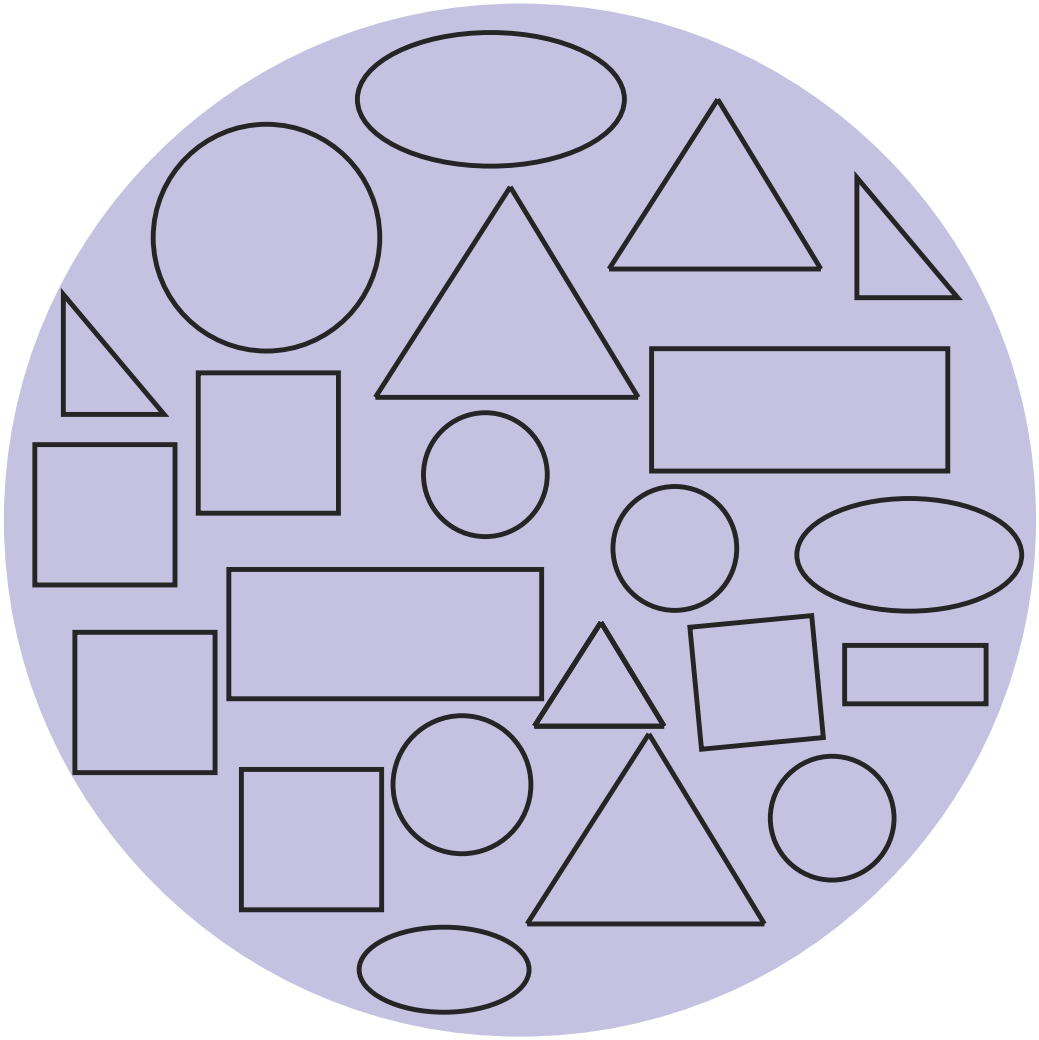
Copy the following shapes in your exercise book. Colour the rectangle red and the squares blue.



Tell your partner why they are rectangles and why they are squares.

Activity 5: Work in pairs.

Look at the following shapes. Answer the questions that follow.



1. How many triangles can you count?
2. How many rectangles can you count?
3. How many ovals can you count?

4. How many circle can you count?
5. How many squares are there?

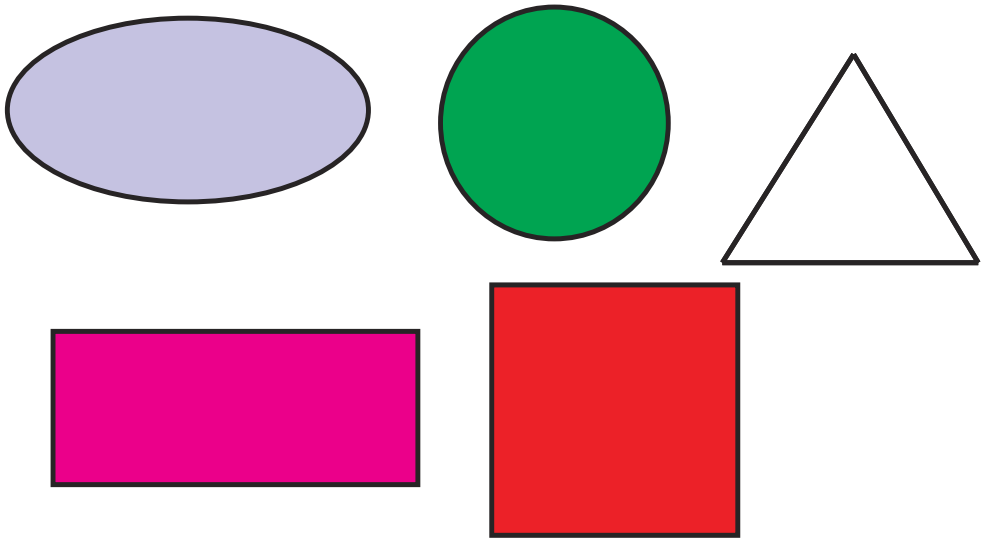
Activity 6: Work in groups.

1. Collect materials from the environment.
2. Make the following crafts.
3. What shapes have you made?

3.2 Patterns

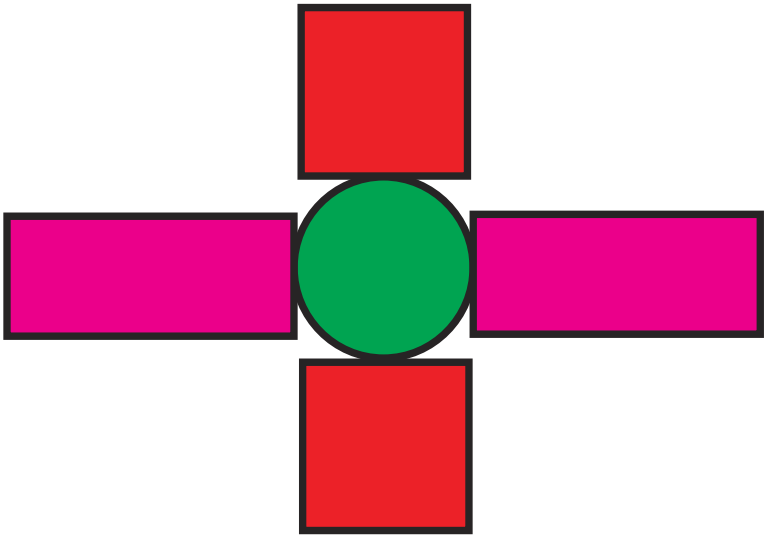
Activity 1

In groups, draw and cut out the following shapes. Ask your teacher for assistance. Cut as many shapes as possible.

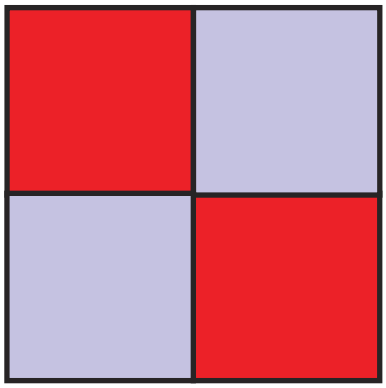


From the cut out shapes make the following patterns.

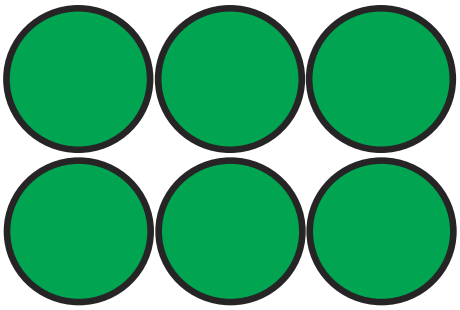
1.



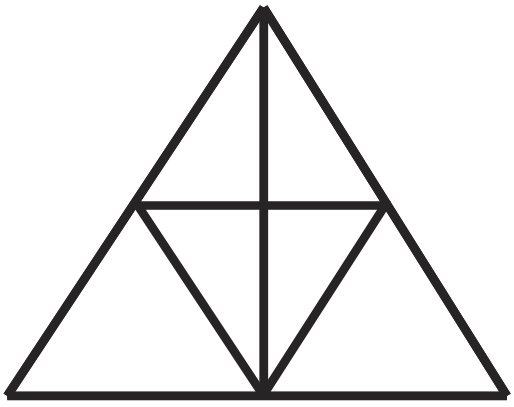
2.



3.



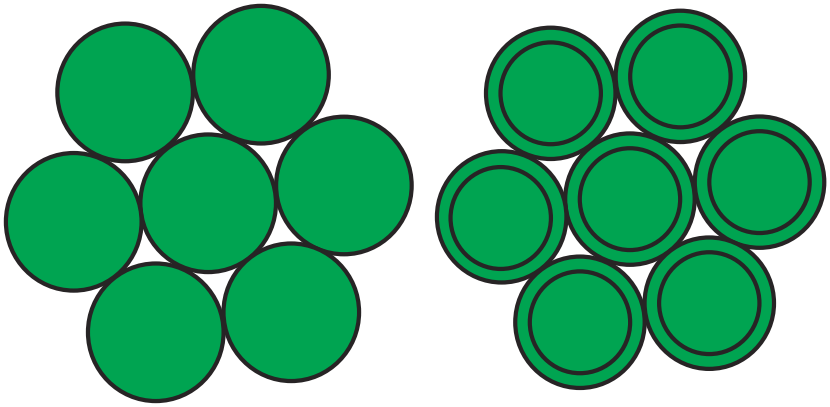
4.



Activity 2

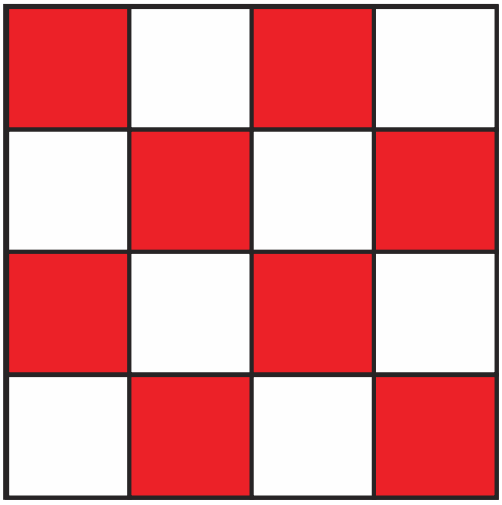
Using the cut outs you have made, do the following activities in groups.

1. Use the circular cut outs to make the following pattern.



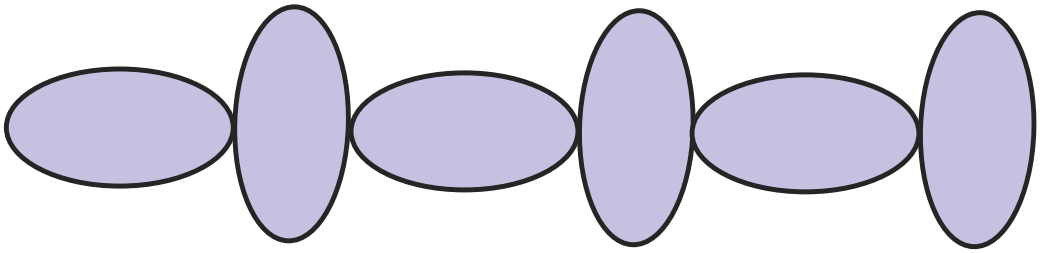
How many circles make the pattern above?

2. Use the square cut outs to make the following pattern.



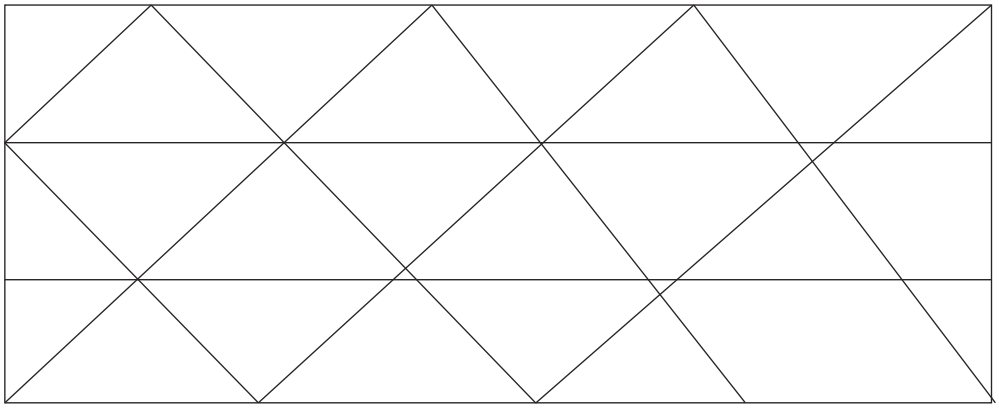
How many squares are there in the pattern above?

3. Use the oval cut outs to make the following pattern.



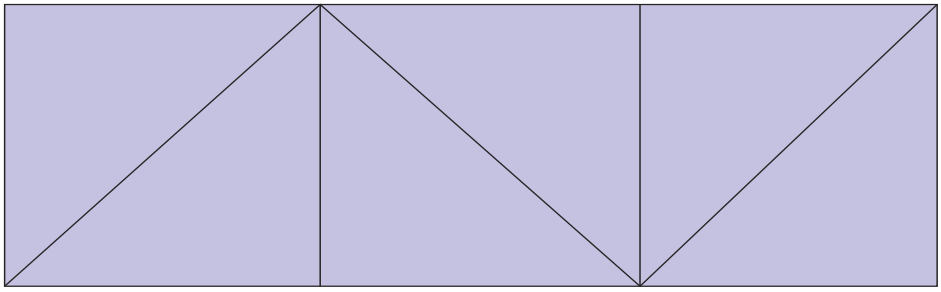
How many rectangles and ovals make the pattern respectively?

4. Use the triangular cut outs to make the following pattern.



How many triangles are there in the pattern?

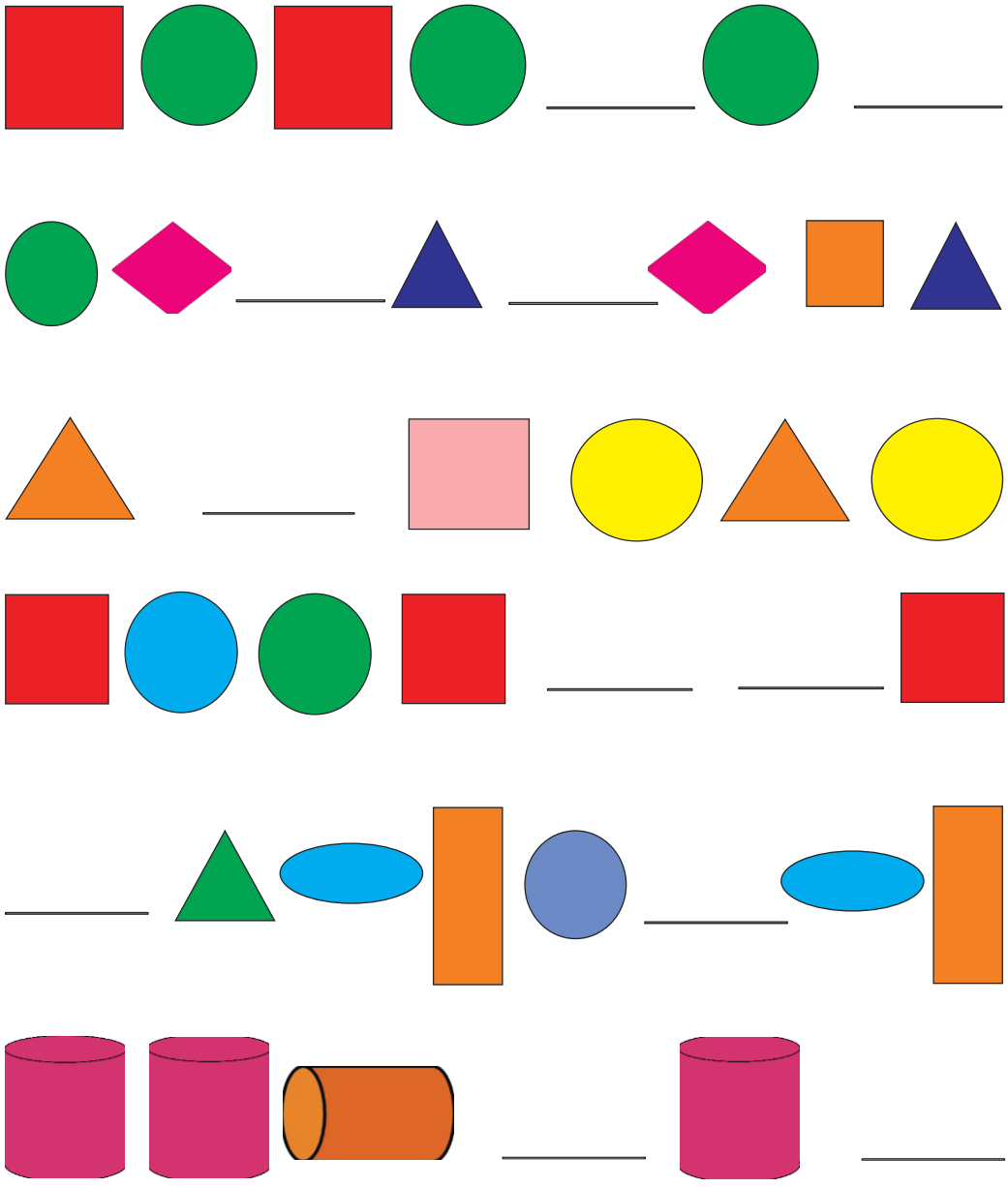
5. Use the square, rectangular and triangular cut outs to make the following patterns.



How many triangles, rectangles and squares are there respectively?

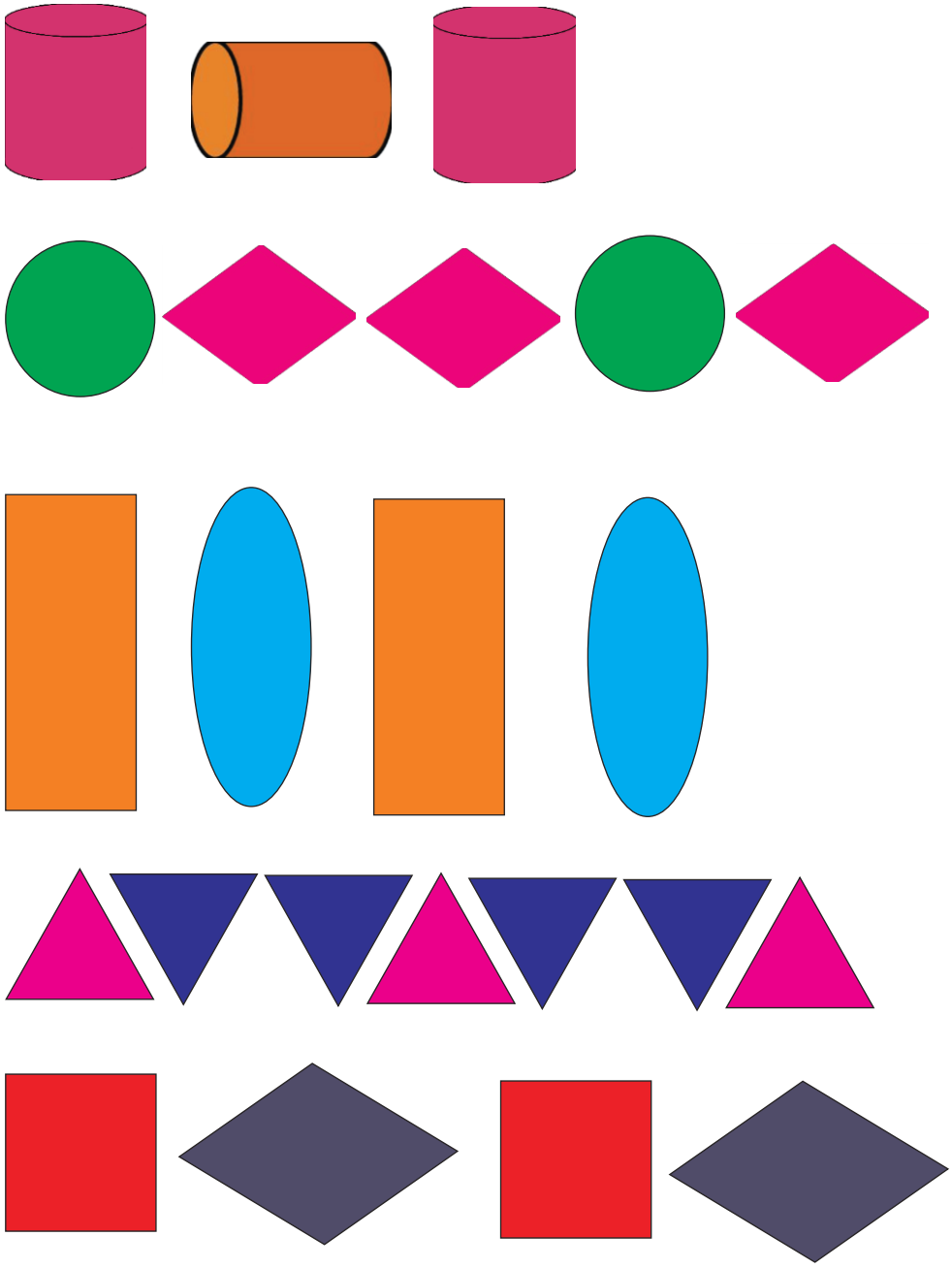
Activity 3: Individually

Look at the following patterns. Copy them in your exercise book. Draw the missing shape.



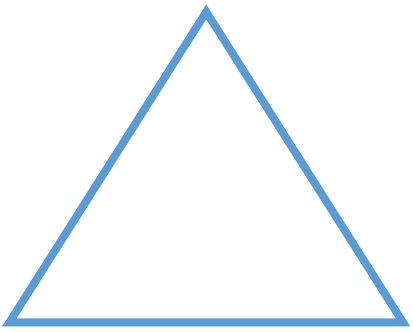
Activity 4: Individually

Copy the pattern. Draw the next shape.

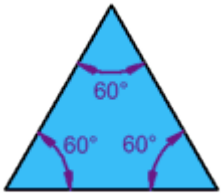


3.3 Properties of triangles

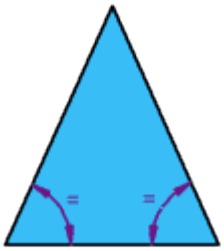
A triangle is a plane figure with three straight sides and three angles.



Types of triangles



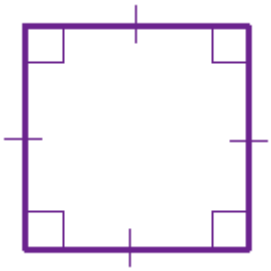
Equilateral Triangle
Three equal sides
Three equal angles, always 60°



Isosceles Triangle
Two equal sides
Two equal angles

Scalene Triangle
No equal sides
No equal angles

3.4 Properties of a square



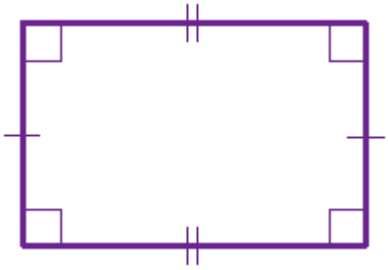
□ means "right angle"

| show equal sides

Activity 1

Study the shape. From the diagram, what properties do you observe? Talk in groups and then present to the class.

3.5 Properties of a rectangle



□ means "right angle"

| and || show equal sides

Activity 2

Study the shape. From the diagram, what properties do you observe? Talk in groups and then present to the class.

Activity 3

Look at the pictures on the following page and count the number of shapes. **How many?**

a. Squares

b. Rectangles

c. Triangles

d. Circles