

# South Sudan

ALP I  
I

## Mathematics

### *Learner's Book Level 1*

©2018, THE REPUBLIC OF SOUTH SUDAN, MINISTRY OF GENERAL EDUCATION AND INSTRUCTION.

All rights reserved. No part of this book may be reproduced by any means graphic, electronic, mechanical, photocopying, taping, storage and retrieval system without prior written permission of the Copyright Holder. Pictures, illustrations and links to third party websites are provided by the publisher in good faith, for information and education purposes only.

This book is the property of the Ministry of  
General Education and Instruction.

**THIS BOOK IS NOT FOR SALE**

Funded by:



## FOREWORD

I am delighted to write the foreword for this book. The Ministry of General Education and Instruction (MoGE&I) has developed the Accelerated Learning Programme (ALP) textbooks based on the National Curriculum of South Sudan. The textbook was written to help learners develop the background knowledge and understanding in the subject. It is intended largely to serve as a source of knowledge and understanding of the subject concerned, but not to be considered as a summary of what learners ought to study.

The National Curriculum is a competency based and learner-centered that aims to meet the educational needs and aspirations of the people of South Sudan. Its aims are manifold: (a) Good citizenship (b) successful lifelong learners, (c) creative, active and productive individuals; and (d) Environmentally responsible members of our society.

This textbook was designed by subject panelists to promote the learners' attainment of the following competencies; critical and creative thinking, communication, cooperation, culture and identity.

No one can write a book of this kind without support from colleagues, friends and family. Therefore, I am pleased to register my thanks to Dr Kuyok Abol Kuyok, the Undersecretary of the Ministry, who emphasized the importance of Alternative Education System (AES) and approved the development of its textbooks.

I also want to record my thanks to Ustaz Omot Okony Olok, the Director General for Curriculum Development Centre (CDC) and Ustaz Shadrack Chol Stephen, the Director General for Alternative Education Systems (AES) who worked tirelessly with the subject panelists to develop the textbooks.

Lastly, but not least, my greatest thanks and appreciation must go to the Global Partnership for Education (GPE) and UNICEF-South Sudan for without their support and partnership this textbook would not have seen light.



**Hon. Awut Deng Acuil, MP**  
**Minister,**  
**Ministry of General Education and Instruction**  
**Republic of South Sudan, Juba**

# Table of Contents

<b>UNIT 1: NUMBERS</b> .....	5
1.1 Sorting, Matching and Grouping by Colour .....	5
1.2 Sorting, Matching and Grouping by Shape.....	6
1.3 Counting Numbers .....	10
1.4 Writing 2 Digit Numbers in Words .....	16
<b>1.5 Ordinal Numbers</b> .....	20
<b>1.6 Reading 3 digit numbers</b> .....	21
<b>1.7 Writing 3 digit numbers</b> .....	23
<b>1.8 Ordering numbers</b> .....	24
<b>1.9 Addition &amp; subtraction by using number line</b> .....	27
<b>1.10 Place value</b> .....	30
<b>1.11 Addition of numbers up to 3 digits</b> .....	34
<b>1.12 Subtraction of numbers up to 3 digits without borrowing</b> .....	38
<b>1.13 Rounding off</b> .....	39
<b>1.13 Multiplication</b> .....	41
<b>1.14 Division</b> .....	46
<b>1.15 Fractions</b> .....	53
<b>UNIT 2: MEASUREMENT</b> .....	58
<b>2.1 Length</b> .....	58
<b>2.2 Mass</b> .....	67
<b>2.3 Capacity</b> .....	71
<b>2.4 Money</b> .....	76
<b>2.5 Giving change</b> .....	77
<b>2.6 Shop Price List</b> .....	81
<b>2.7 Time</b> .....	82
<b>2.8 Half past the hour</b> .....	84
<b>2.9 Quarter past the hour and Quarter to the hour</b> .....	85

UNIT 3: <b>GEOMETRY</b> .....	90
<b>3.1 Shapes</b> .....	90
<b>3.2 Patterns</b> .....	97
<b>3.3 Properties of triangles</b> .....	103
3.4 Properties of a square .....	104
3.5 Properties of a rectangle .....	104

# UNIT I:

# NUMBERS

## I.1 Sorting, Matching and Grouping by Colour



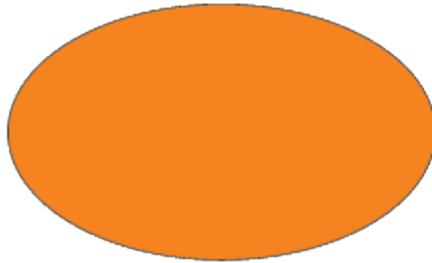
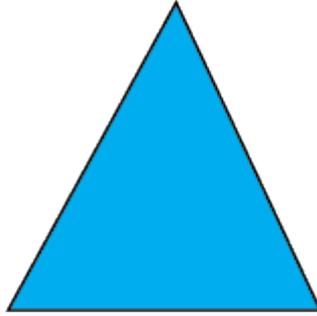
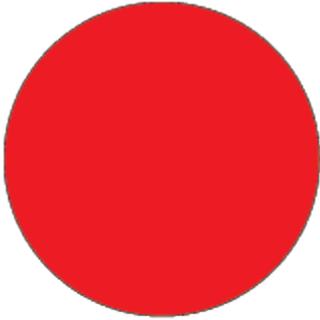
### Activity 1: In pairs.

Discuss the colours of the above objects above.

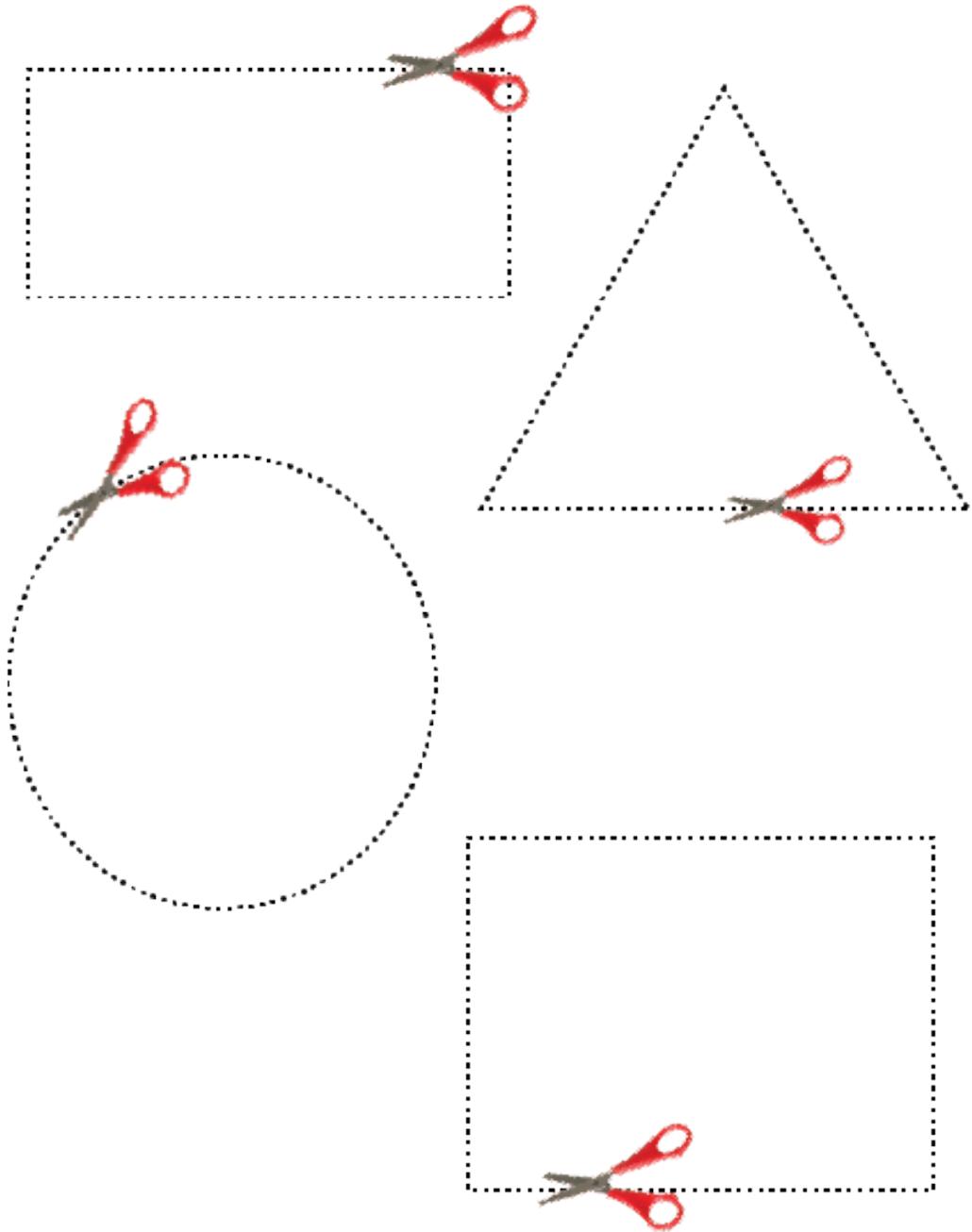
Are there other objects you know that have same colours? In turns, say the

colour and your partner says the object.

## 1.2 Sorting, Matching and Grouping by Shape

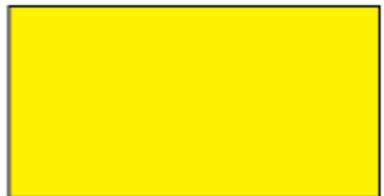
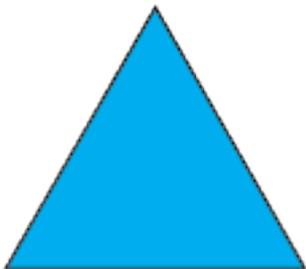
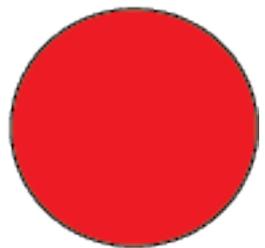
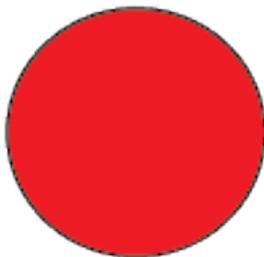
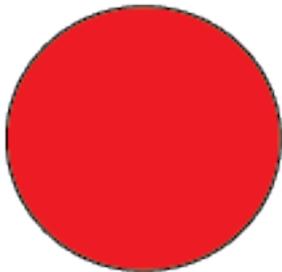
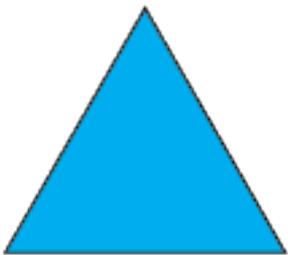


**Activity 2a: In groups**



**Activity 2b: In pairs.**

Choose a shape each from your cut outs.



**Activity 2c: In groups**

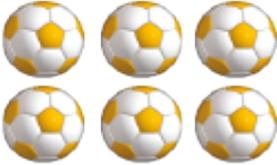
Discuss and list the different shapes you can see.



## 1.3 Counting Numbers

### Activity 3a: Whole class

Count loudly

**Activity 3b: Whole class**

Count loudly

1 2 3       10

11 12 13 14 15     

21 22      28 29 30

31 32       39 40

      47 48 49 50

       58 59 60

61          

71 72         

81          90

        99

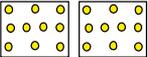
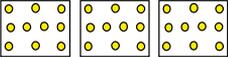
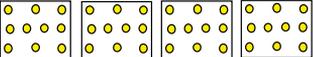
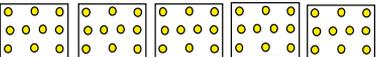
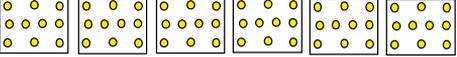
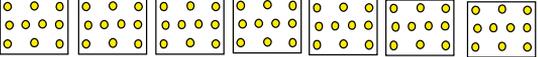
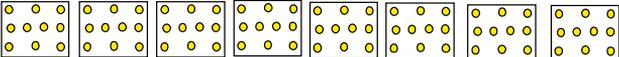
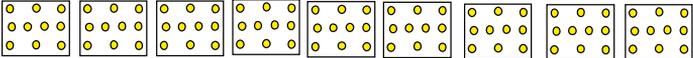
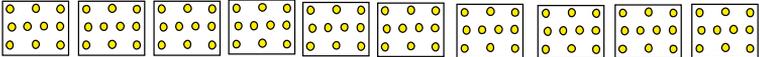
**Activity 3c: In Pairs**

Your partner to say missing number.

1	2		4		6		8		10
		13		15		17		19	
	22		24		26		28		30
31			34		36		38		
		43		45				49	
51		53			56		58		60
	62		64			67		69	
71			74		76		78		
81		83		85		87		89	
91		83			96		98		100

### Activity 3d: Individually

Count the tens and read the numbers alongside

	10 Ten
	20 Twenty
	30 Thirty
	40 Forty
	50 Fifty
	60 Sixty
	70 Seventy
	80 Eighty
	90 Ninety
	100 Hundred

### Activity 3e: Individually

Which is the smaller number?

Why do you say it is the smaller number?

1. 

78	50
----	----

2. 

53	96
----	----

3. 

23	16
----	----

4. 

58	61
----	----

5. 

99	42
----	----

6. 

76	79
----	----

7. 

15	33
----	----

8. 

12	11
----	----

9. 

56	68
----	----

10. 

17	39
----	----

Which is the bigger number?

Why do you say it is the bigger number?

30	50
----	----

14	39
----	----

22	33
----	----

51	56
----	----

65	96
----	----

63	21
----	----

42	58
----	----

49	59
----	----

**Activity 3f: In pairs,**

A. Discuss number comes **after** the one given?

- |     |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
|-----|---|----|--|-----|---|----|--|-----|---|----|--|-----|---|----|--|
| 1.  | <table border="1"><tr><td>12</td><td></td></tr></table> | 12 |  | 2.  | <table border="1"><tr><td>45</td><td></td></tr></table> | 45 |  | 3.  | <table border="1"><tr><td>55</td><td></td></tr></table> | 55 |  | 4.  | <table border="1"><tr><td>43</td><td></td></tr></table> | 43 |  |
| 12  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 45  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 55  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 43  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 5.  | <table border="1"><tr><td>62</td><td></td></tr></table> | 62 |  | 6.  | <table border="1"><tr><td>23</td><td></td></tr></table> | 23 |  | 7.  | <table border="1"><tr><td>80</td><td></td></tr></table> | 80 |  | 8.  | <table border="1"><tr><td>87</td><td></td></tr></table> | 87 |  |
| 62  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 23  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 80  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 87  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 9.  | <table border="1"><tr><td>70</td><td></td></tr></table> | 70 |  | 10. | <table border="1"><tr><td>63</td><td></td></tr></table> | 63 |  | 11. | <table border="1"><tr><td>44</td><td></td></tr></table> | 44 |  | 12. | <table border="1"><tr><td>65</td><td></td></tr></table> | 65 |  |
| 70  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 63  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 44  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 65  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 13. | <table border="1"><tr><td>14</td><td></td></tr></table> | 14 |  | 14. | <table border="1"><tr><td>32</td><td></td></tr></table> | 32 |  | 15. | <table border="1"><tr><td>39</td><td></td></tr></table> | 39 |  | 16. | <table border="1"><tr><td>36</td><td></td></tr></table> | 36 |  |
| 14  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 32  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 39  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 36  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 17. | <table border="1"><tr><td>26</td><td></td></tr></table> | 26 |  | 18. | <table border="1"><tr><td>78</td><td></td></tr></table> | 78 |  | 19. | <table border="1"><tr><td>16</td><td></td></tr></table> | 16 |  | 20. | <table border="1"><tr><td>27</td><td></td></tr></table> | 27 |  |
| 26  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 78  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 16  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |
| 27  |   |    |  |     |   |    |  |     |   |    |  |     |   |    |  |

B. Discuss number comes **before** the one given?

- |     |   |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|-----|---|--|----|-----|---|--|----|-----|---|--|----|-----|---|--|----|
| 1.  | <table border="1"><tr><td></td><td>24</td></tr></table> |  | 24 | 2.  | <table border="1"><tr><td></td><td>95</td></tr></table> |  | 95 | 3.  | <table border="1"><tr><td></td><td>49</td></tr></table> |  | 49 | 4.  | <table border="1"><tr><td></td><td>85</td></tr></table> |  | 85 |
|     | 24  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 95  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 49  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 85  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
| 5.  | <table border="1"><tr><td></td><td>56</td></tr></table> |  | 56 | 6.  | <table border="1"><tr><td></td><td>82</td></tr></table> |  | 82 | 7.  | <table border="1"><tr><td></td><td>32</td></tr></table> |  | 32 | 8.  | <table border="1"><tr><td></td><td>36</td></tr></table> |  | 36 |
|     | 56  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 82  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 32  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 36  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
| 9.  | <table border="1"><tr><td></td><td>40</td></tr></table> |  | 40 | 10. | <table border="1"><tr><td></td><td>61</td></tr></table> |  | 61 | 11. | <table border="1"><tr><td></td><td>67</td></tr></table> |  | 67 | 12. | <table border="1"><tr><td></td><td>15</td></tr></table> |  | 15 |
|     | 40  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 61  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 67  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 15  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
| 13. | <table border="1"><tr><td></td><td>66</td></tr></table> |  | 66 | 14. | <table border="1"><tr><td></td><td>13</td></tr></table> |  | 13 | 15. | <table border="1"><tr><td></td><td>75</td></tr></table> |  | 75 | 16. | <table border="1"><tr><td></td><td>27</td></tr></table> |  | 27 |
|     | 66  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 13  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 75  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |
|     | 27  |  |    |     |   |  |    |     |   |  |    |     |   |  |    |

C. Which number comes in between

Count loudly

1. 

12		14
----	--	----

    2. 

54		56
----	--	----

    3. 

19		21
----	--	----
5. 

26		28
----	--	----

    6. 

67		69
----	--	----

    7. 

61		63
----	--	----
9. 

31		33
----	--	----

    10. 

73		75
----	--	----

    11. 

4		6
---	--	---

#### 1.4 Writing 2 Digit Numbers in Words

**Activity 4: Individually,**

Look at the following table, count loudly and say the number

Object	Numeral	Words
	1	One
	2	Two
	3	Three
	4	Four
	5	Five

Object	Numeral	Words
	6	Six
	7	Seven
	8	Eight
	9	Nine
	10	Ten
	11	Eleven
	12	Twelve
	13	Thirteen
	14	Fourteen
	15	Fifteen

**Activity 5: Individually.**

In an exercise book, write the number in words or the numeral.

1. a) 20                      b) 35                      c) 56

d) 22                      e) 83                      f) 43

2.

a) Ninety-nine                      h) Fifty four

b) Seventy-seven                      i) Ninety seven

c) Sixty five                      j) Sixty

d) Ninety one                      k) Seventy

e) Forty two                      l) Twelve

f) Seventy six                      m) Eighty six

g) Forty nine                      n) Thirty four

**Activity 6: Whole class game**

One of you says a number and another writes the number in words on the blackboard

**Activity 7: Individually Count in 2s**

1	2	3	4	5	6	7	8	9
11	12	13	14	15	16	17	18	19
21	22	23	24	25	26	27	28	29

**Count in 5s.**

1	2	3	4	5	6	7	8	9
11	12	13	14	15	16	17	18	19
21	22	23	24	25	26	27	28	29
31	32	33	34	35	36	37	38	39

**Activity 8: In groups.**

Orally count in two's and five's. Take turns as you count.

## 1.5 Ordinal Numbers

**Activity: In groups**

Look at the picture and discuss position

1 <sup>st</sup>	first	
2 <sup>nd</sup>	second	
3 <sup>rd</sup>	third	
4 <sup>th</sup>	fourth	
5 <sup>th</sup>	fifth	
6 <sup>th</sup>	sixth	
7 <sup>th</sup>	seventh	
8 <sup>th</sup>	eighth	
9 <sup>th</sup>	ninth	
10 <sup>th</sup>	tenth	

## 1.6 Reading 3 digit numbers

### Activity 9

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 10

---

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 11

---

Read these number names. Work in pairs.

- a) Two Hundred and Twelve
- b) One Hundred and Thirty Five
- c) Four Hundred and Seventeen
- d) Nine Hundred and Twenty Six
- e) Seven Hundred and Thirty Four
- f) Six Hundred and Forty Seven
- g) Eight Hundred and Eighty Eight

## 1.7 Writing 3 digit numbers

### Activity 12

---

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 13

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

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

### Activity 14

Read and write the numbers in words. Work in pairs

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

### Activity 15

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

## 1.8 Ordering numbers

**Activity 16:** 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?

## 1.9 Addition & subtraction by using number line

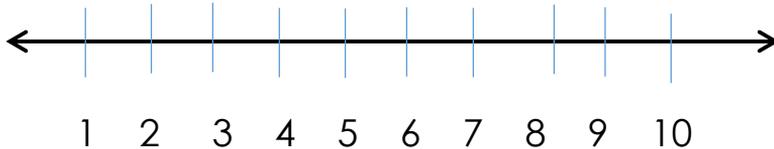
**Activity 1:** Whole class activity.



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

**Activity 18:** 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**

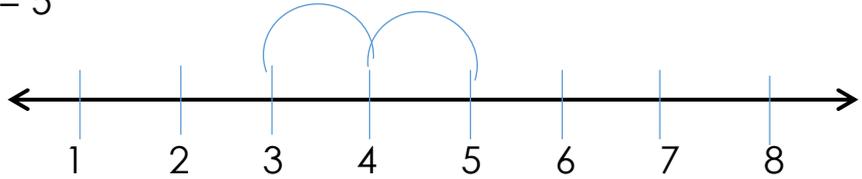
Start again at number seven. And count 4 steps to the

left. Where do you stop? **At number 7 - 4 = 3**

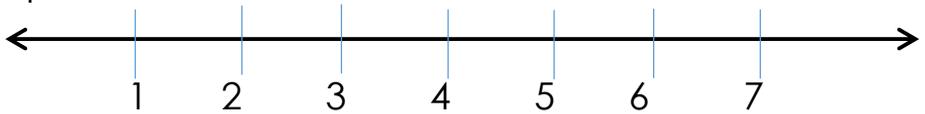
**Activity 19:** Work in pairs.

1. Add these numbers using a number line.

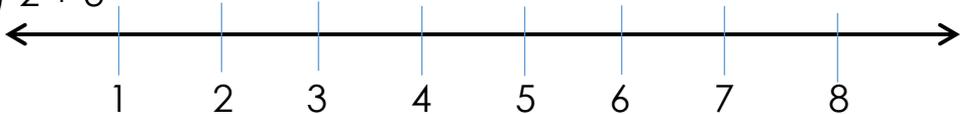
a)  $3 + 2 = 5$



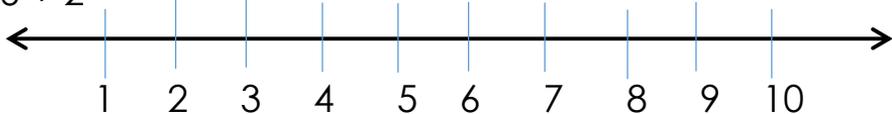
b)  $4 + 1 =$



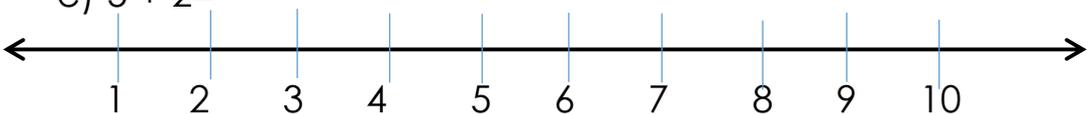
c)  $2 + 3 =$



d)  $6 + 2 =$

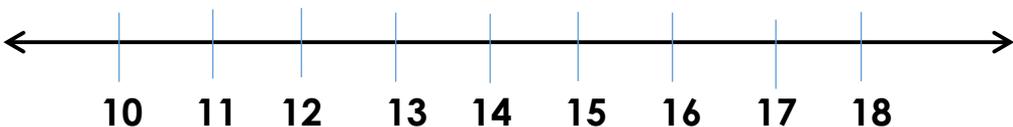


e)  $5 + 2 =$



2. Add using number line

a)  $10 + 4 = 14$

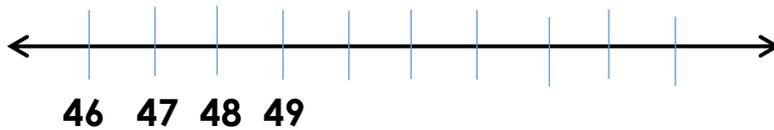


b)  $21 + 3 =$

c)  $30 + 5 =$

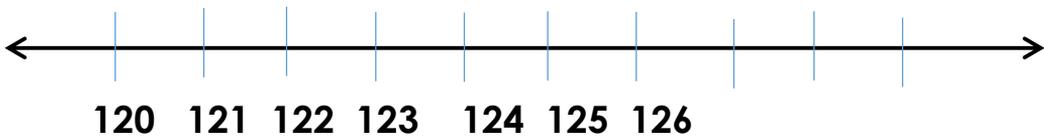
d)  $52 + 6 =$

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)  $7 - 2 =$

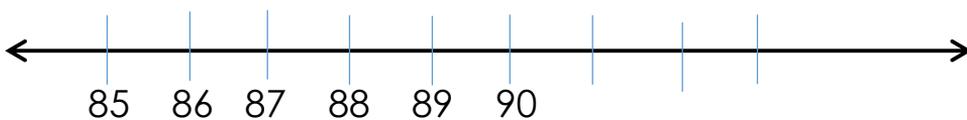
d)  $5 - 4 =$

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)  $115 - 5 =$

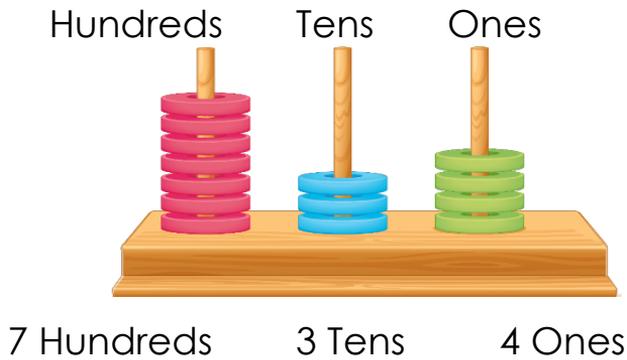
d)  $230 - 6 =$

e)  $310 - 8 =$



### 1.10 Place value

We can use the abacus to represent 734.



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.



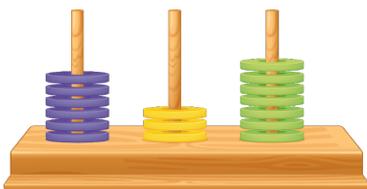
### Example

349

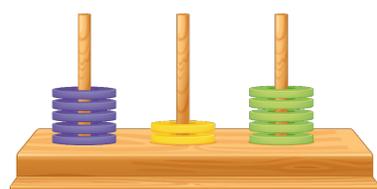
Number	place value
3	Hundreds
4	Tens
9	Ones

**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 20

---

1. Complete the following table. Work in pairs.

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

### Activity 21

---

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

- a) **321**=Tens
- b) **632**
- c) **423**
- d) **216**
- e) **572**
- f) **736**
- g) **914**

### Activity 22: 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 23

---

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

a) **205** \_\_\_\_\_

f) **592** \_\_\_\_\_

b) **571** \_\_\_\_\_

g) **856** \_\_\_\_\_

c) **795** \_\_\_\_\_

h) **625** \_\_\_\_\_

d) **1245** \_\_\_\_\_

i) **517** \_\_\_\_\_

e) **965** \_\_\_\_\_

j) **215** \_\_\_\_\_

### Activity 24: Work in groups

---

1. Write the place value of the underlined digit in these numbers.  
Explain how you got the answer.

a) **164**

f) **288**

b) **270**

g) **179**

c) **912**

h) **219**

d) **791**

i) **812**

e) **100**

2. Write the digit that represents place value of ones in these numbers.  
Explain how you got the answer.

a) **47**

e) **99**

b) **940**

f) **510**

c) **69**

g) **451**

d) **881**

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** \_\_\_\_\_

## 1.11 Addition of numbers up to 3 digits

### Activity 25

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

Step 3. 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.

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

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
5. tens digits.
6. 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**.

$$\mathbf{26 + 37 = 63}$$

$384 + 208$

Re-arrange the numbers.

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

1. Add the ones digit  $4+8=12$
2. Write 2 which is the ones digit and carry 1 forward.
3. Add  $1+8+0=9$
4. Add  $3+2=5$

$$\mathbf{384 + 208 = 592}$$

### Activity 26

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 27

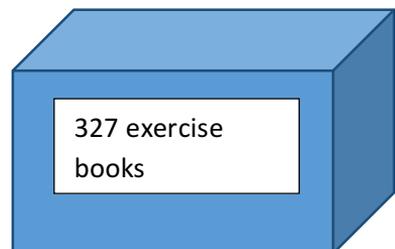
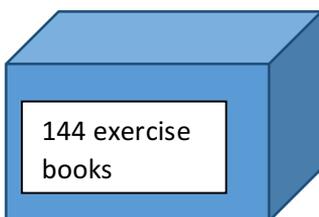
---

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?



- A school has 436 pupils. Another school has 581 pupils. How many pupils are there all together?
- A primary school has 372 boys and 263 girls. How many boys and girls are there all together?

### 1.12 Subtraction of numbers up to 3 digits without borrowing

#### Activity 28

---

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)  $634 - 23 =$

k)  $568 - 327 =$

l)  $972 - 341 =$

#### Activity 29

---

Word problems. Solve in groups.

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

## 1.13 Rounding off

### Activity 30

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

### Rounding Chart

The diagram shows a grid of numbers from 0 to 100. A vertical red line is drawn between the 50 and 55 columns. To the left of the line, a blue arrow points left with the text 'Round down'. To the right of the line, a blue arrow points right with the text 'Round up'. This pattern is repeated below the grid.

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 31:** Complete in groups.

---

1. Round off the following numbers to the nearest tens.

a) 314

d) 512

b) 327

e) 638

c) 476

f) 761

2. Round off the following to the nearest hundreds.

a) 365

e) 619

b) 413

f) 534

c) 271

g) 473

d) 738

h) 657

### 1.13 Multiplication

Count these sticks.



$$3 + 3 + 3 + 3 = 12$$

How many groups of 3 are there?

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

#### Activity 32

Count and write the numbers.



$$1 + 1 + 1 =$$

$$3 \times 1 = 3$$

1)  $///// + ///// + ///// =$

$$3 \times 5 =$$

2)  $/// /// /// ///$

$$3 + 3 + 3 + 3 =$$

$$4 \times 3 =$$

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

$$5 + 5 + 5 + 5 =$$

$$4 \times 5 =$$

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

$$3 + 3 + 3 + 3 + 3 =$$

$$5 \times 3 =$$

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

$$5 + 5 + 5 + 5 + 5 =$$

$$5 \times 5 =$$

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

$$2 + 2 + 2 + 2 + 2 =$$

$$5 \times 2 =$$

**Write repeated addition sentences as multiplication**

**Example**



$$2 + 2 + 2 + 2$$

Can also be written as  $4 \times 2 = 8$



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

**Activity 33: Work in pairs.**

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

1)  $5 + 5 + 5$   
 $\_\_\_ \times 5 =$

2)  $3 + 3 + 3 + 3 + 3$   
 $\_\_\_\_\_ \times 3 =$

3)  $4 + 4 + 4$   
 $3 \times \_\_\_ =$

4)  $2 + 2 + 2$   
 $\_\_\_ \times 2 =$

5)  $1 + 1 + 1 + 1 + 1$   
 $5 \_\_\_\_\_ = \_\_\_\_\_$

6)  $5 + 5$   
 $2 \times \_\_\_ = \_\_\_\_\_$

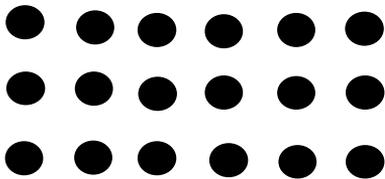
7)  $4 + 4$   
 $\_\_\_ \times \_\_\_ = 8$

8)  $2 + 2 + 2 + 2 + 2$   
 $\_\_\_ \times 2 = \_\_\_\_\_$

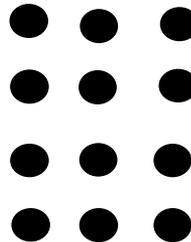
9)  $4 + 4 + 4 + 4 + 4$   
 $\_\_\_\_\_ \times \_\_\_ = 20$

**Example**

$3 \times 6 = 18$



$4 \times 3 = 12$



**Activity 34: 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 35:** Complete in groups.

### Multiply

$1 \times 5 =$

$1 \times 6 =$

$1 \times 7 =$

$2 \times 5 =$

$2 \times 6 =$

$2 \times 7 =$

$3 \times 5 =$

$3 \times 6 =$

$3 \times 7 =$

$4 \times 5 =$

$4 \times 6 =$

$4 \times 7 =$

$5 \times 5 =$

$5 \times 6 =$

$5 \times 7 =$

$6 \times 5 =$

$6 \times 6 =$

$6 \times 7 =$

$7 \times 5 =$

$7 \times 6 =$

$7 \times 7 =$

$8 \times 5 =$

$8 \times 6 =$

$8 \times 7 =$

$9 \times 5 =$

$9 \times 6 =$

$9 \times 7 =$

$10 \times 5 =$

$10 \times 6 =$

$10 \times 7 =$

$1 \times 8 =$

$1 \times 9 =$

$1 \times 10 =$

$2 \times 8 =$

$2 \times 9 =$

$2 \times 10 =$

$3 \times 8 =$

$3 \times 9 =$

$3 \times 10 =$

$4 \times 8 =$

$4 \times 9 =$

$4 \times 10 =$

$5 \times 8 =$

$5 \times 9 =$

$5 \times 10 =$

$6 \times 8 =$

$6 \times 9 =$

$6 \times 10 =$

$7 \times 8 =$

$7 \times 9 =$

$7 \times 10 =$

$8 \times 8 =$

$8 \times 9 =$

$8 \times 10 =$

$9 \times 8 =$

$9 \times 9 =$

$9 \times 10 =$

$10 \times 8 =$

$10 \times 9 =$

$10 \times 10 =$

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

### Activity 36

---

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 mats in a row and 4 mats 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?
- 

### 1.14 Division

Division is sharing.

#### **Activity 37: Talk in pairs.**

Look at the pictures below. What is happening?





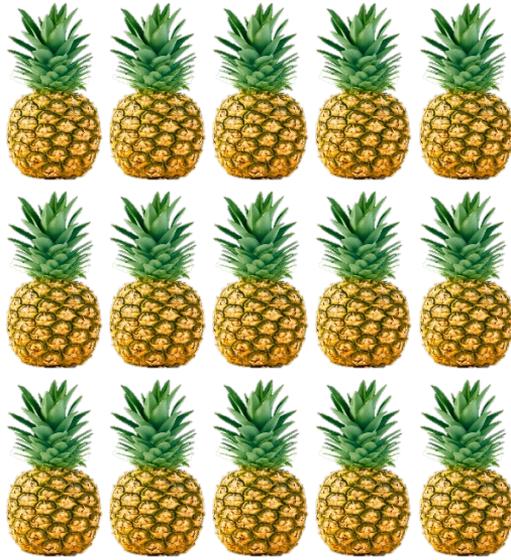
**Activity 38:** Solve in groups.

---

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 oranges.



This can also be written as  $\frac{15}{3}$

**Activity 39:** 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 40:** 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 get?

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?



Pupil 1



pupil 2



pupil 3



pupil 4



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

#### Activity 41

---

##### 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 42: 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 43:** Solve in groups.

---

Divide:

$6 \div 3 =$

$9 \div 3 =$

$8 \div 4 =$

$12 \div 4 =$

$24 \div 6 =$

$21 \div 3 =$

$12 \div 3 =$

$18 \div 3 =$

$8 \div 2 =$

$10 \div 5 =$

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: 44**

---

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 45: Work in groups.**

---

Game involving division.

**Divide**

$15 \div 3 =$

$18 \_ 3 =$

$16 \_ 4 =$

$15 \_ 5 =$

**Answer**

15 divide by 3 is 5

18 divide by 6 is 3

16 divide by 4 is 4

15 divide by 5 is 3

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

<b>10 ÷ 5</b>	_____
<b>14 ÷ 2</b>	_____
<b>25 ÷ 5</b>	_____
<b>24 ÷ 3</b>	_____
<b>20 ÷ 5</b>	_____
<b>20 ÷ 4</b>	_____

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

### Activity 46

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?

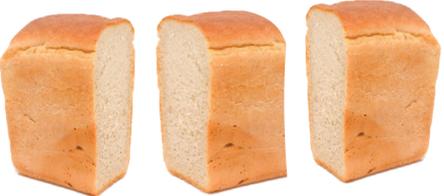
## 1.15 Fractions

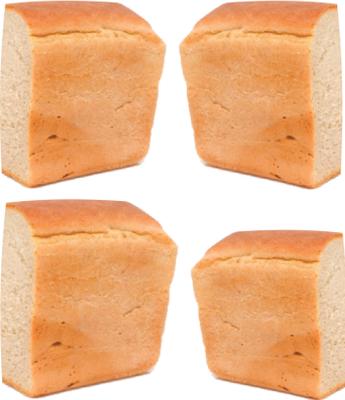
What is a fraction?

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

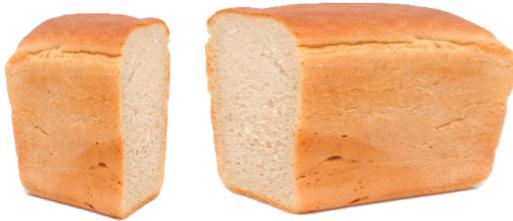
### Activity: 47

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 $\frac{1}{3}$ .

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

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 of 3 equal parts, which is expressed as two-thirds, or  $\frac{2}{3}$  in the language of fractions.

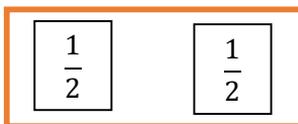


Activity: 48

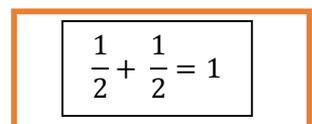
1. Take a rectangular sheet of paper. Fold it into two parts from the centre by making a crease. The crease divides the sheet of paper into two equal parts. Each part is called one-half of the whole.



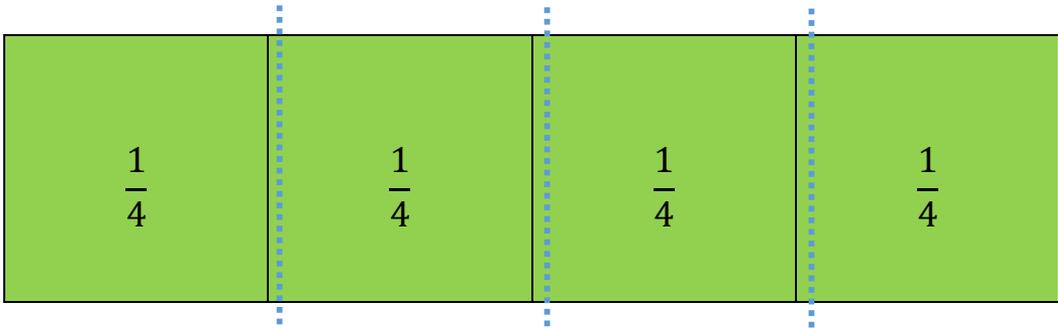
1



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.

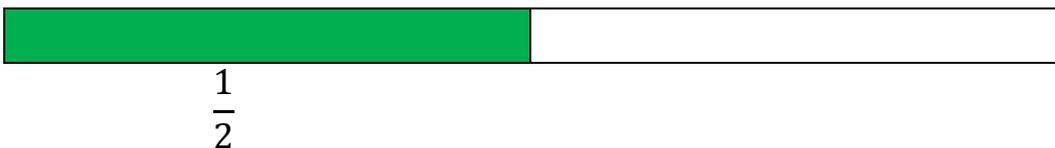
3. Take another sheet and fold it into three equal parts.

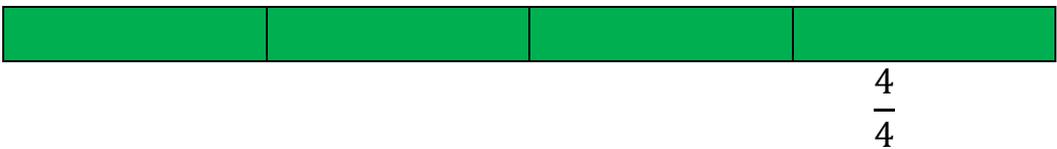
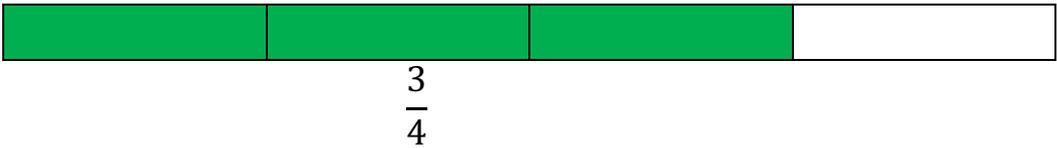
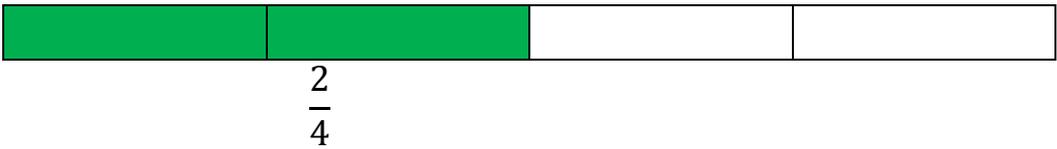
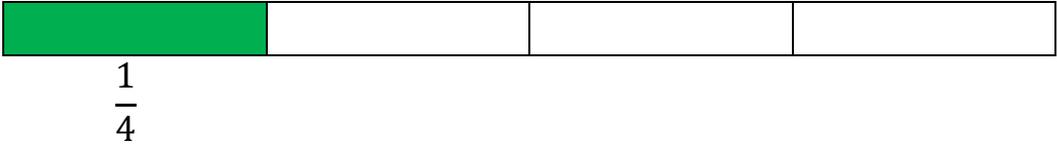
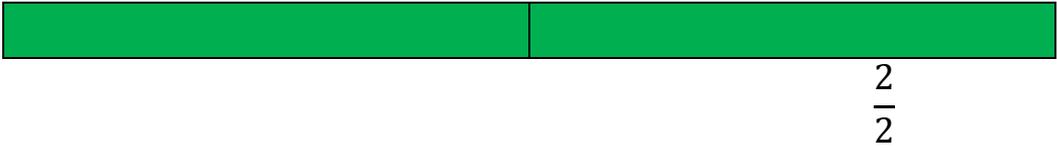


Each part is called one-third and is expressed as  $\frac{1}{3}$  (read as one over three).

### 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.





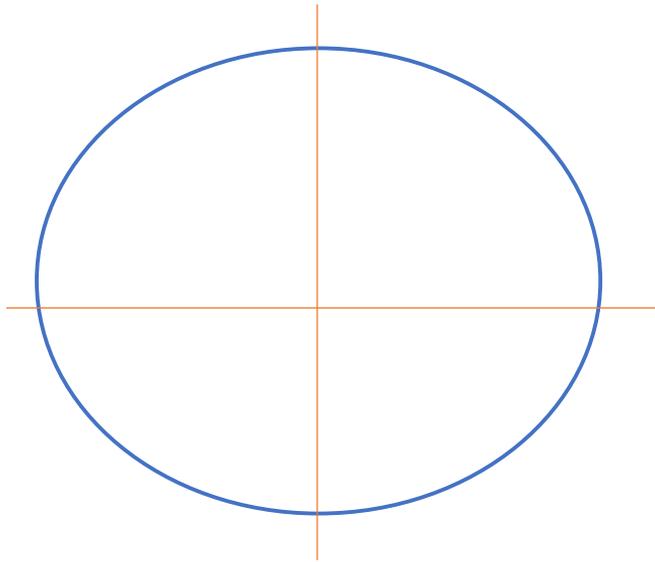
What do you observe?

a) \_\_\_\_\_ halves equal 1      \_\_\_\_\_ quarters equal 1

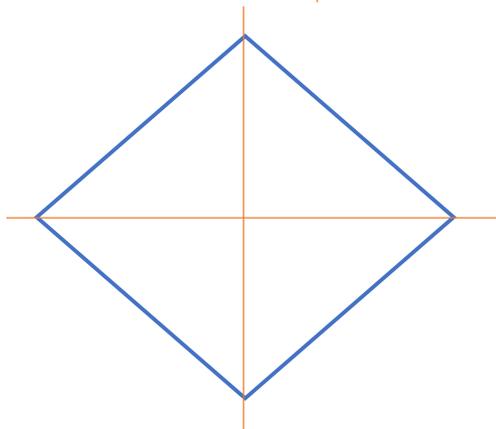
b) \_\_\_\_\_ quarters equal  $\frac{1}{2}$       \_\_\_\_\_ quarters equal  $\frac{3}{4}$

Activity 49

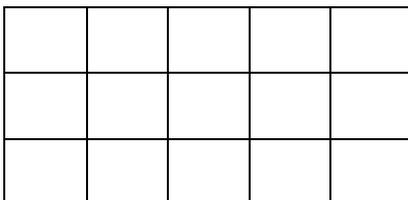
Copy and colour each of the following shapes given to show the fraction.



$$\frac{2}{4}$$



$$\frac{3}{4}$$



$$\frac{9}{15}$$

# UNIT 2:

# MEASUREMENT

## Length, mass and weight

### 2.1 Length

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

#### Activity 1

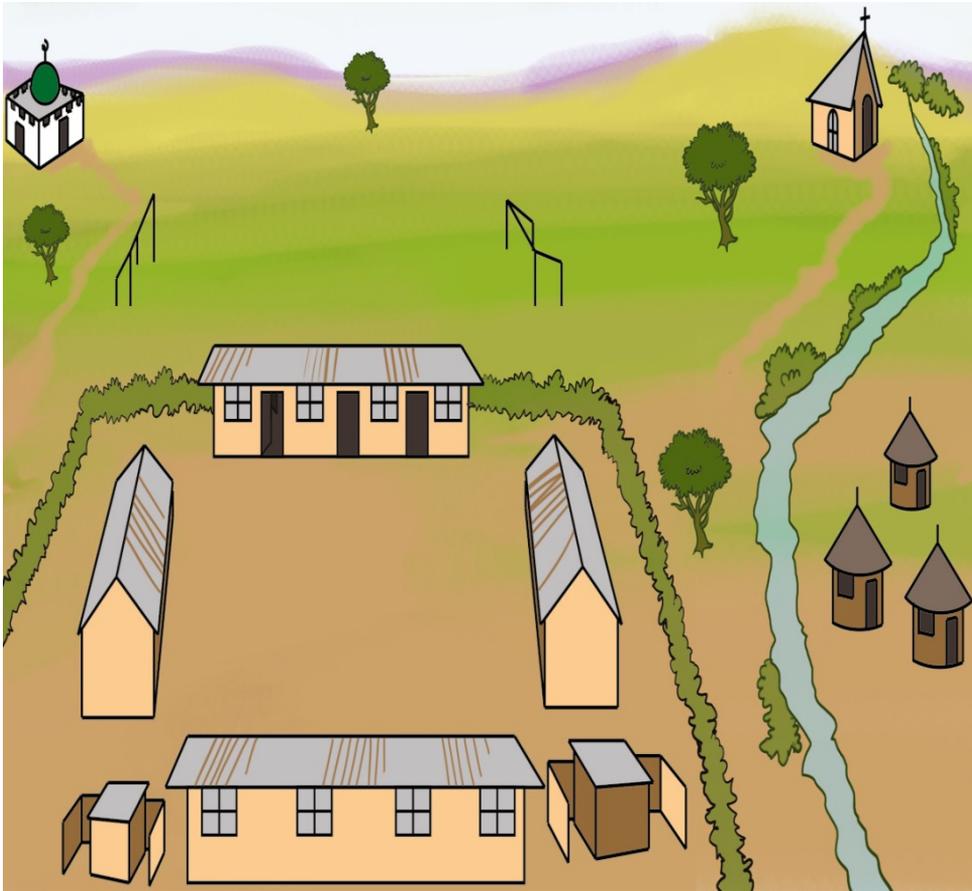
1. Estimate how long it takes to walk from your home to school.

Who takes more time to reach school their home?



Why you do take longer to school than your partner?

In small groups, walk to the following places,  
Head teacher's office, toilet block and school gate.

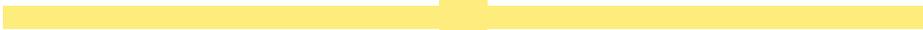


How many steps did you take to reach

## Activity 2

---

Which is the longer?



Activity: 3

---

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



Discuss in groups.

#### Activity 4

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
<b>Classroom:</b> Length width	_____ sticks _____ sticks
<b>Cupboard</b> Length width	_____ sticks _____ sticks
Desk length	_____ sticks
Distance from the flag post to the nearest class	_____ sticks
<b>Window</b> Length width	_____ sticks _____ sticks

#### Activity 5

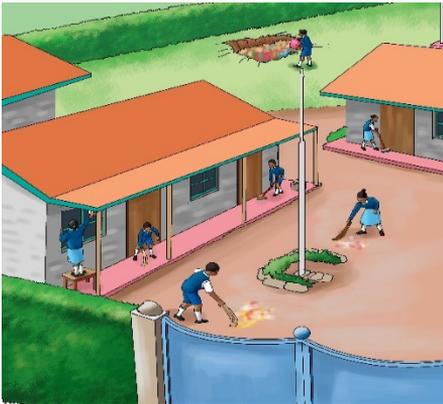
In groups, use sticks or strings of different lengths, 1m sticks and 1m ruler to measure the lengths of objects in the table below. Copy and complete the table in your exercise books.

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

cupboard	Length		
	width		
Door	Length		
	width		

### Activity 6

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.



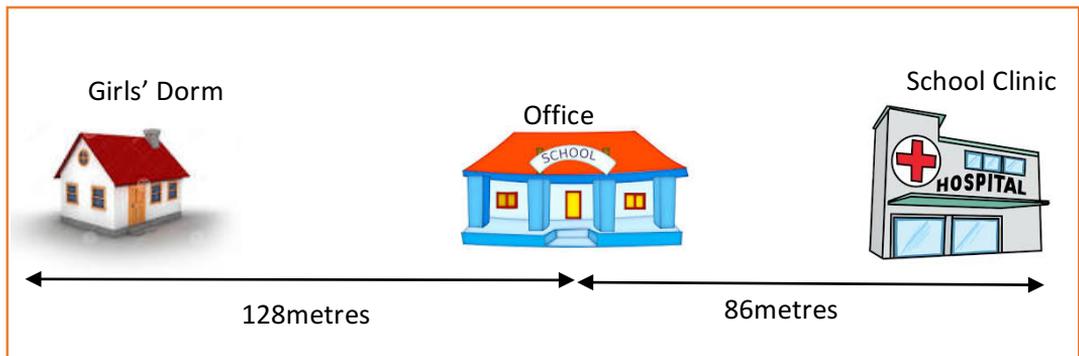
The height of any four classmates.



The distance from the door to your chair.

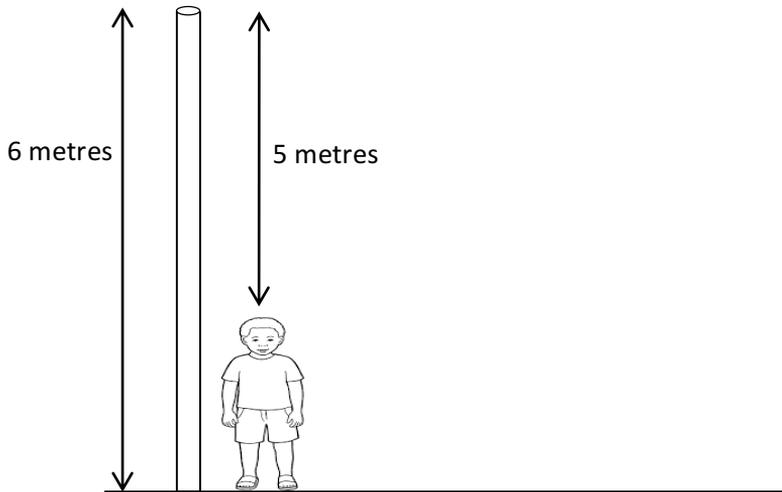
**Activity 7:** *Work in groups.*

**Study the picture below and answer the questions that follow.**

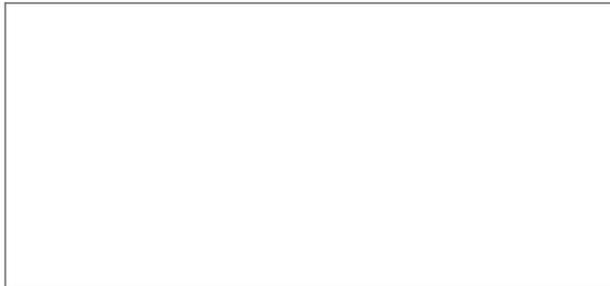


1. Jane walked from the girls' dorm to the school clinic and back to the headmaster's office. How many meters did she cover.
2. The school nurse walked from the headmaster's office to the girls' dorm and then walked back to the clinic. How many meters did she walk in total?

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 8

---

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.  $589 \text{ m} + 24 \text{ m} =$

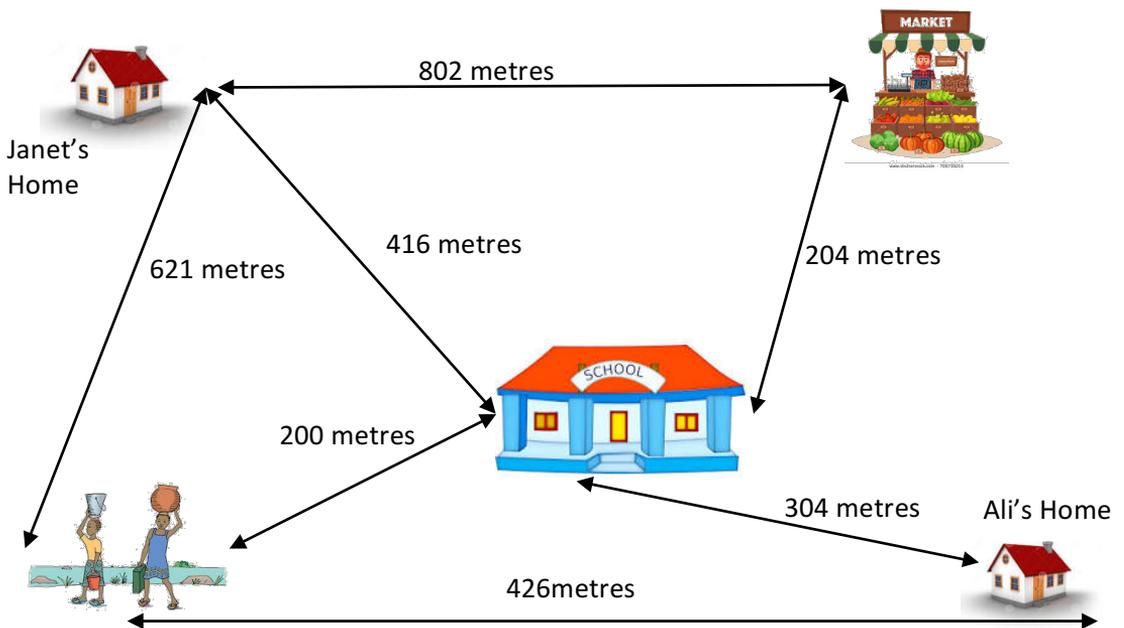
5.  $762 \text{ m} + 34 \text{ m} =$

6.  $17 \text{ m} + 107 \text{ m} =$

### Activity 9

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 he 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 10:** *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 1 kg container of soil to show heavier, lighter or same.



**1 kg of soil is heavier than a cup.**

**Activity 11: Work in groups.**

Use 1 kg container of soil to show heavier, lighter or same. Record your observations in your exercise books.

1.

1 kg soil



Small stone

2.

1 kg soil



Text book

3.

A carton of books



1 kg of soil

4.

1 kg of soil



A tin of soil

5.

1 kg soil



A pair of shoes

6.

1 kg soil



A ball

7.

Piece of metal



1 kg of soil

8.

1 kg soil



1 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 flour?
6. Which is heavier, 1 kg piece of wood or 1 kg of feathers?

### Activity 12

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



## 2.3 Capacity

### Activity 13



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?

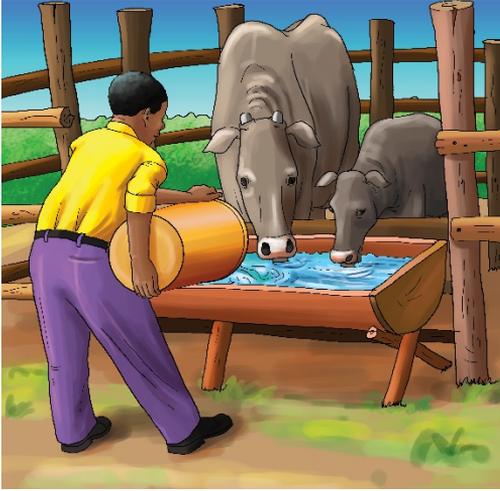


In pairs, talk about the picture on the left.

## Activity 14

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

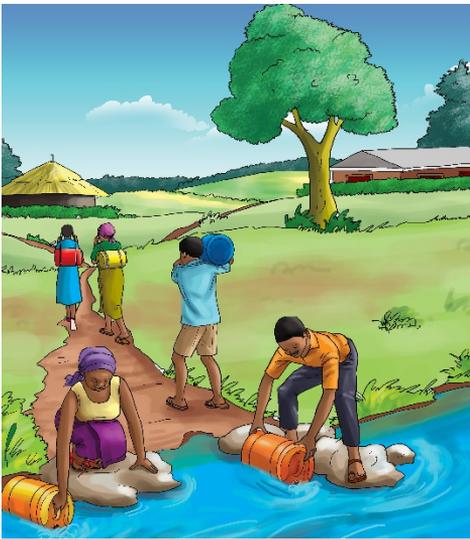
1.



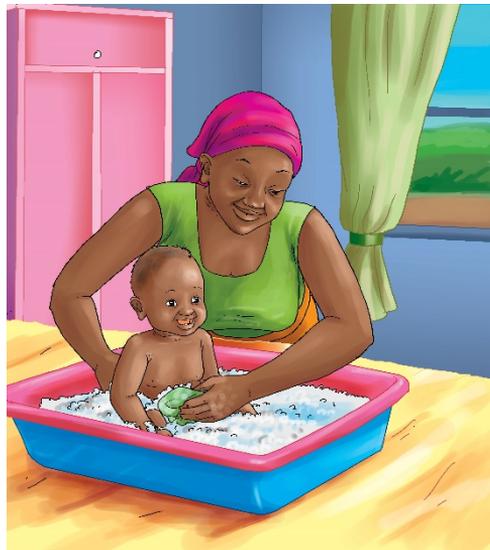
2.



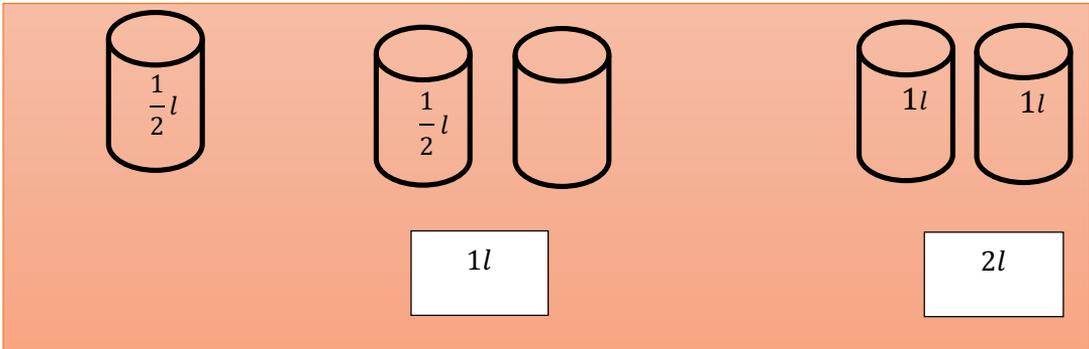
3.



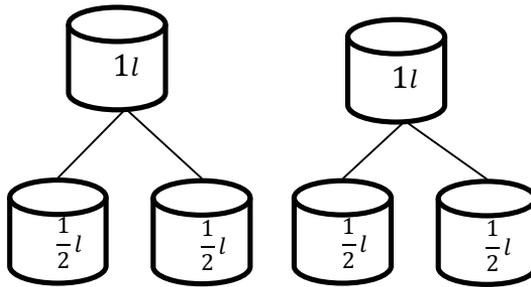
4.



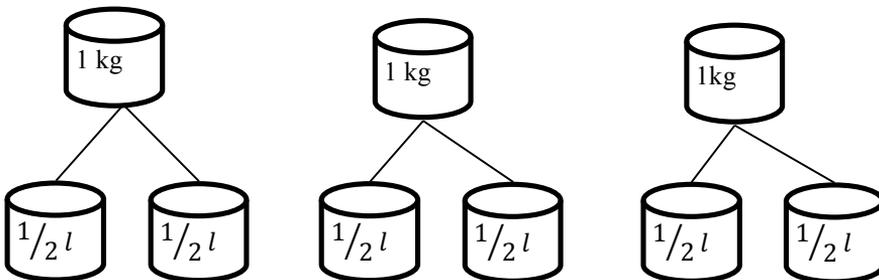
## Activity 15



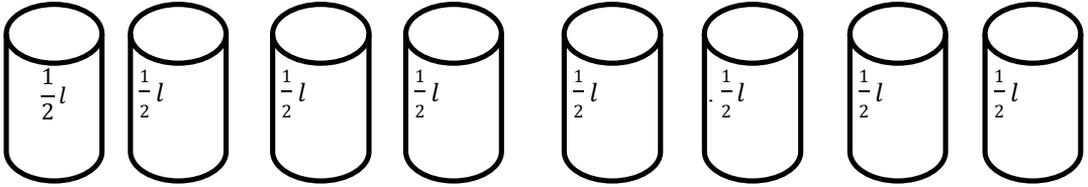
1. How many half litres are there in 2 litres?



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 16

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
1 litre 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 17

---

Work out in groups.

1.  $80 \text{ half litres} + 20 \text{ half litres} =$
2.  $100 \text{ half litres} + 23 \text{ half litres} =$
3.  $32 \text{ half litres} - 3 \text{ half litres} =$
4.  $45 \text{ half litres} - 21 \text{ half litres} =$
5.  $92 \text{ half litres} + 22 \text{ half litres} =$
6.  $21 \text{ half litres} - 3 \text{ half litres} =$
7.  $16 \text{ litres} + 34 \text{ litres} =$
8.  $30 \text{ litres} + 41 \text{ litres} =$
9.  $51 \text{ litres} + 20 \text{ litres} =$
10.  $50 \text{ litres} - 27 \text{ litres} =$
11.  $100 \text{ litres} - 33 \text{ litres} =$
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

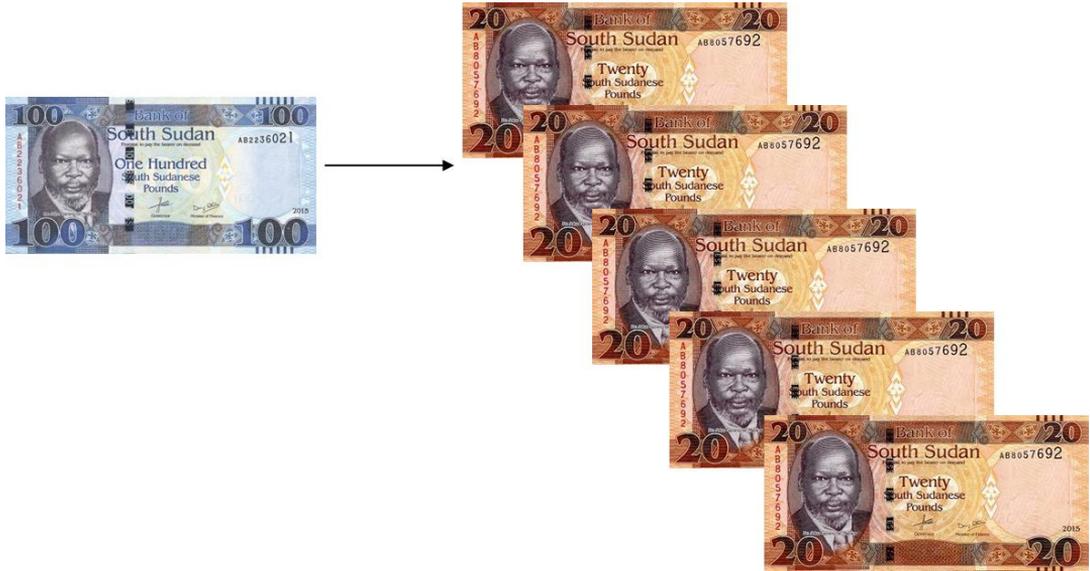


## 2.5 Giving change

### Activity 18

Work in groups.  
What do you see?





## Activity 19

True or False. Work in pairs.

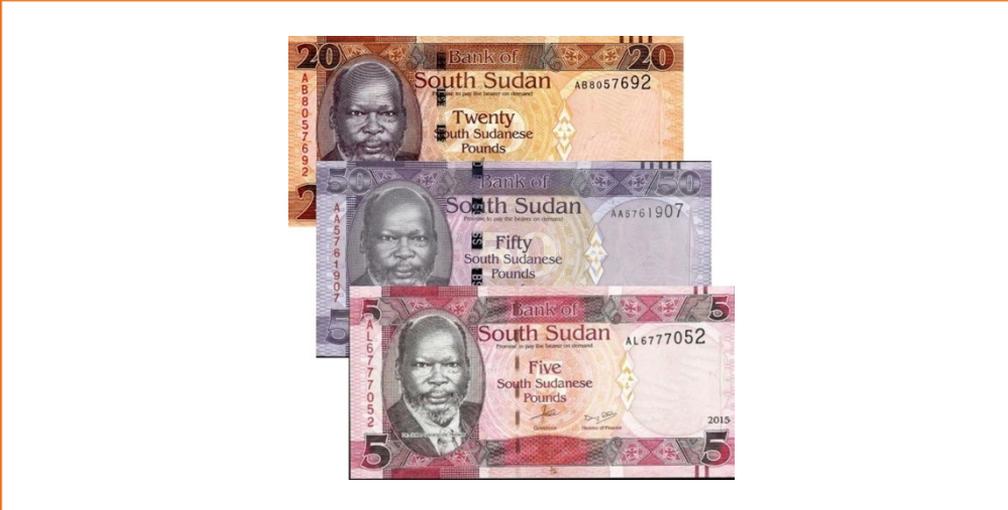
	=		_____
---	---	--	-------

	=		_____
---	---	---	-------



**Activity 20**

How much?





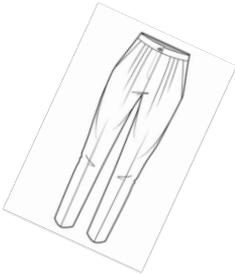
**Activity 21:** Work in pairs.

---

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 22:** 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 23

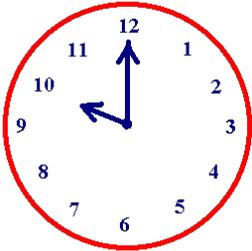
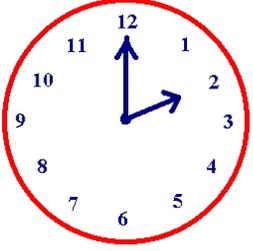
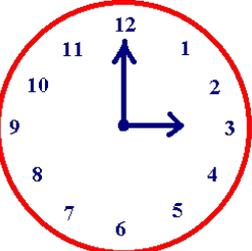
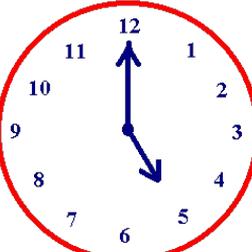
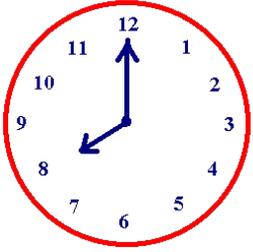
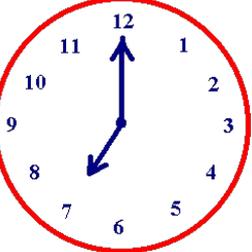
Look at the following pictures. What time do you think it is? Why? Talk in groups.

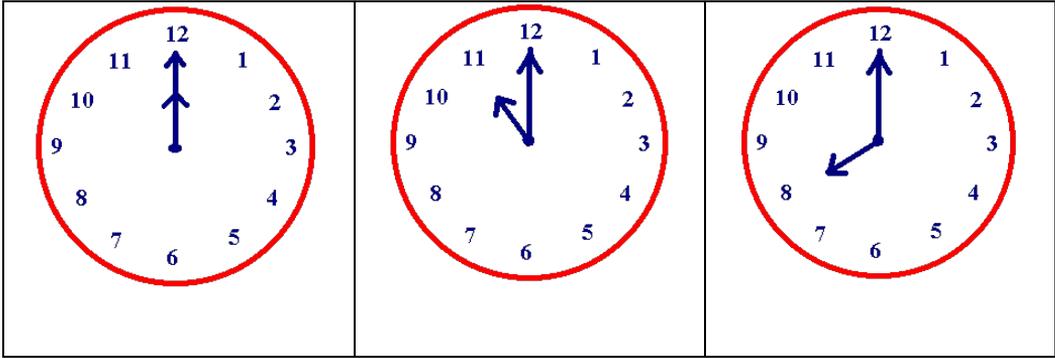




### Activity 24

What is the time? Work in pairs.

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



### Activity 25

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.

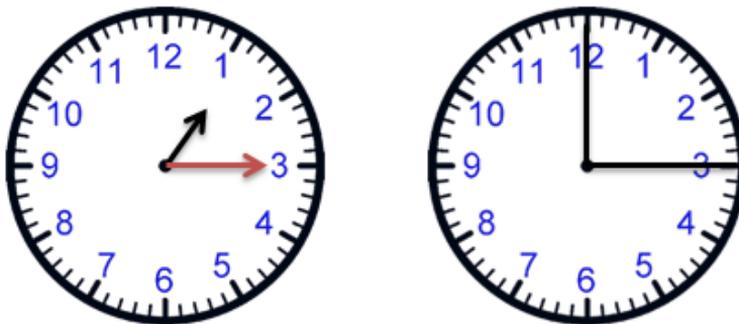
### Activity 26

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

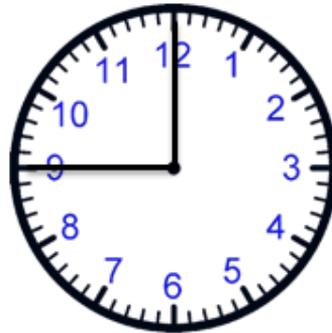
### 2.9 Quarter past the hour and Quarter to the hour

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 27

---

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 28

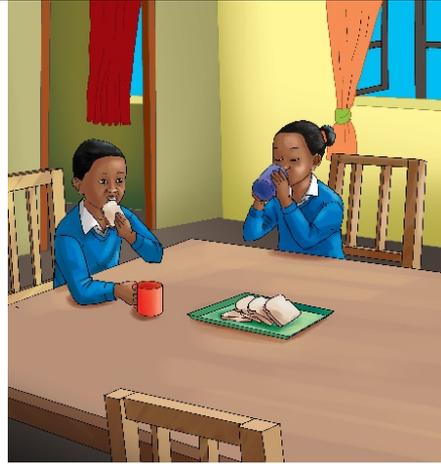
---

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

--	--



Wake up.



Have breakfast.



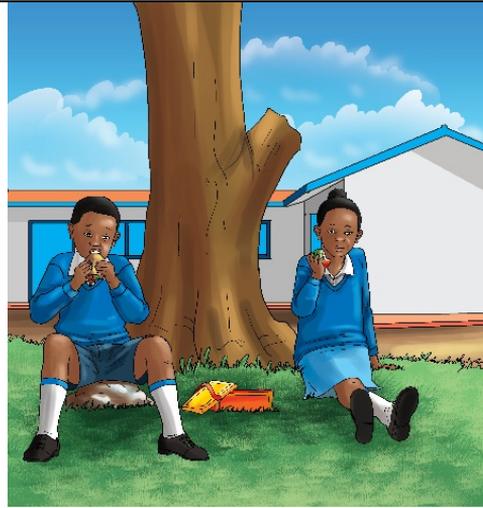
Start for school.



First lesson of the day.



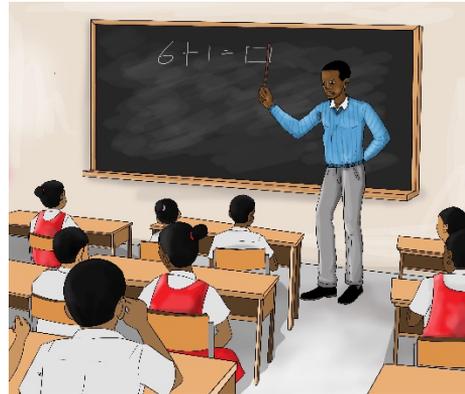
Go for break.



Have lunch.



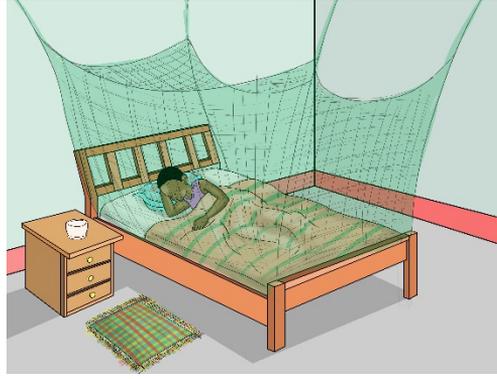
First lesson in the afternoon



Last lesson of the day.



Go home after school.



Go to bed.

### Activity 29

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

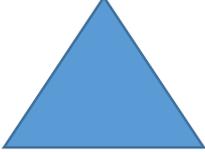
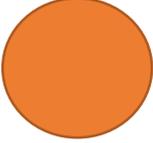
Look at the pictures below. What geometric shapes can you see? Talk in groups.



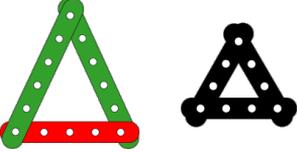


**Activity 2:** Work in pairs.

---

			
<b>rectangle</b>	<b>triangle</b>	<b>circle</b>	<b>square</b>

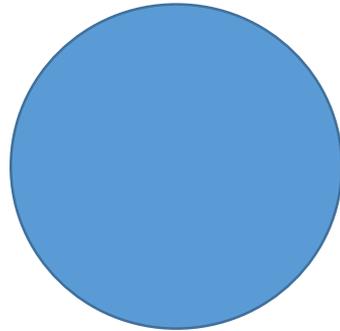
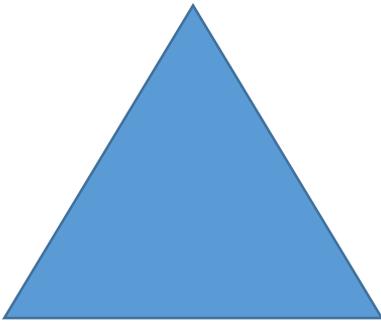
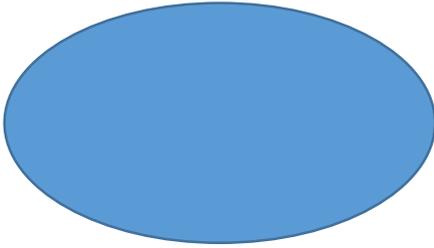
What shapes do you see in the pictures?

Activity 3: Work in pairs.

Draw and name these shapes.

---

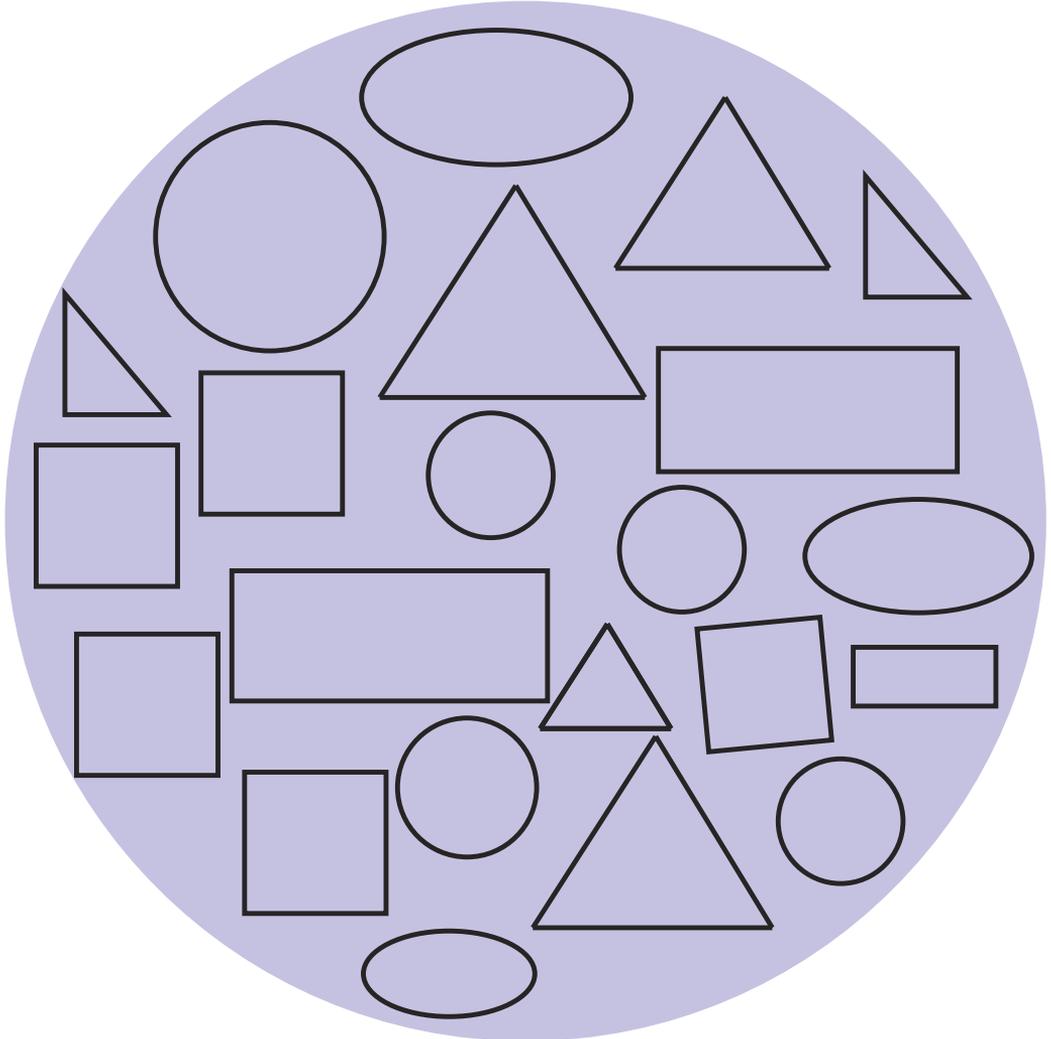


**Look around the classroom and point out different shapes.**



Activity 5: Work in pairs.

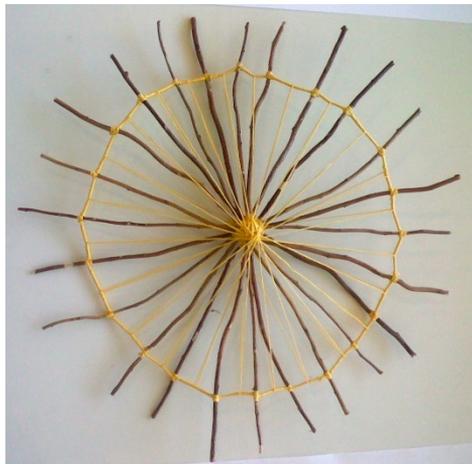
Look at the following shapes. Answer the questions that follow.



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.

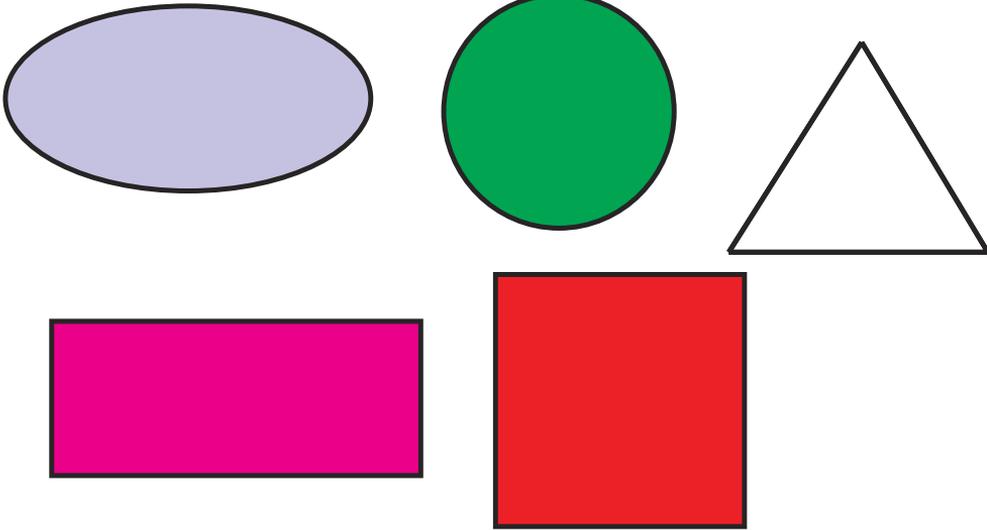
1. Collect materials from the environment.
2. Make the following crafts.
3. What shapes have you made?



## 3.2 Patterns

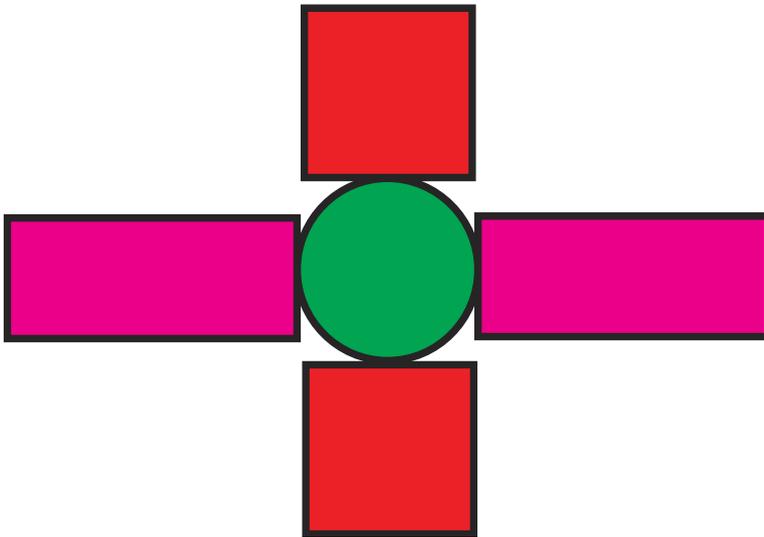
### Activity 7

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

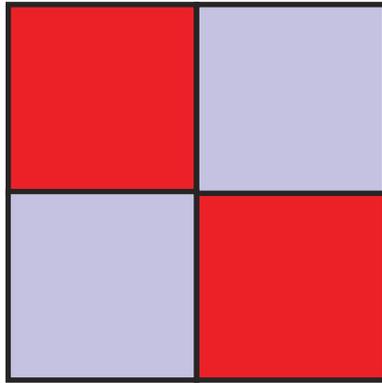


From the cut out shapes make the following patterns.

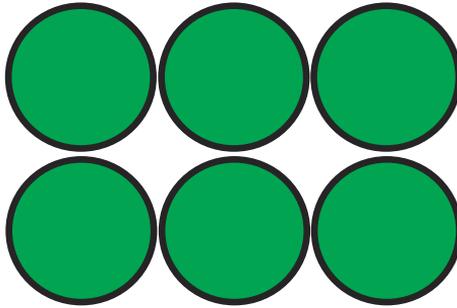
1.



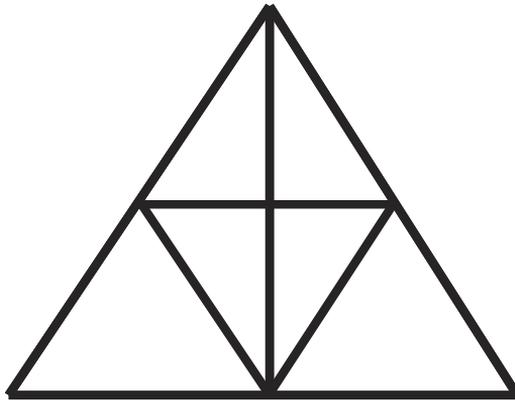
2.



3.



4.

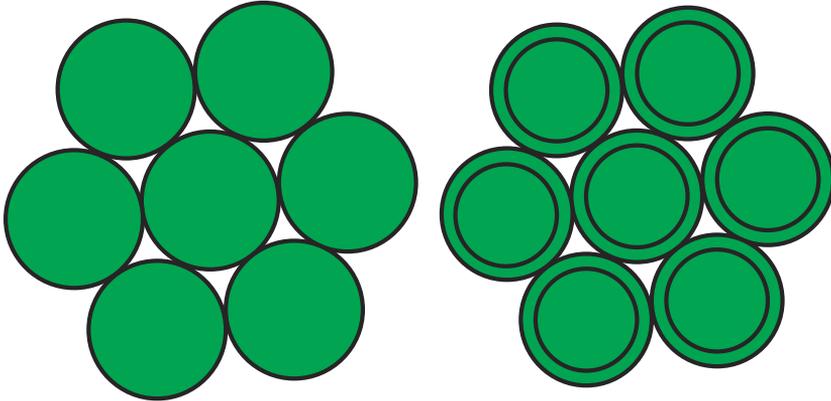


## Activity 8

---

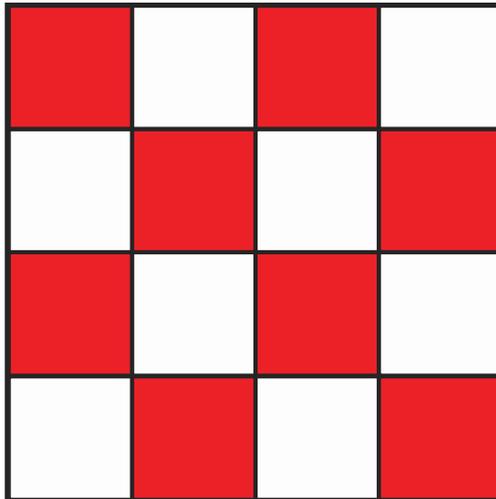
Using the cut outs you have made, do the following activities in groups.

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



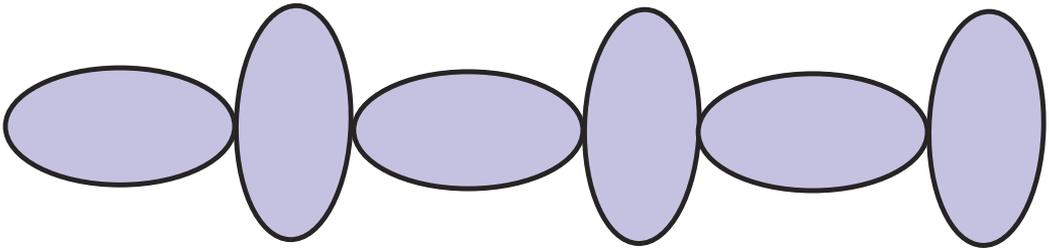
How many circles make the pattern above?

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



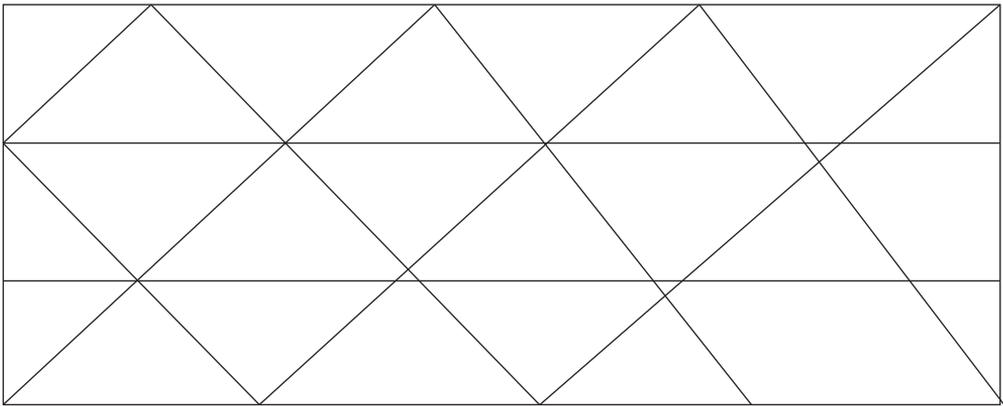
How many squares are there in the pattern above?

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



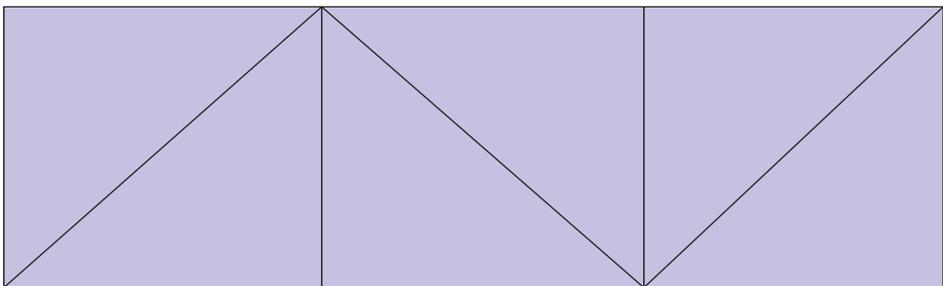
How many rectangles and ovals make the pattern respectively?

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.

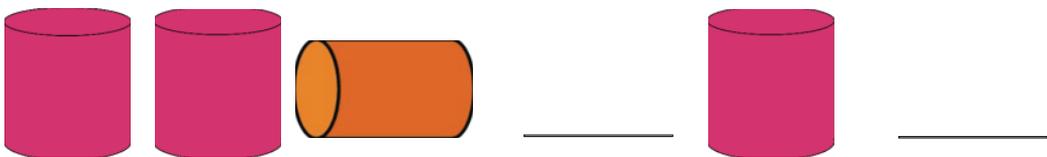
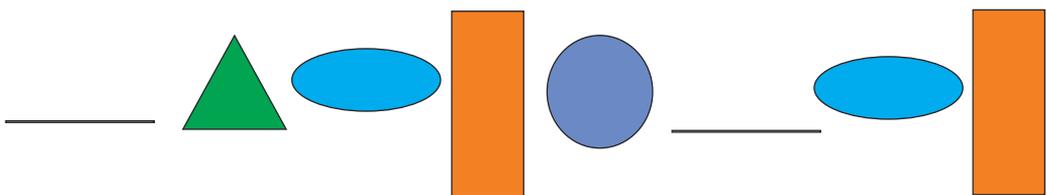
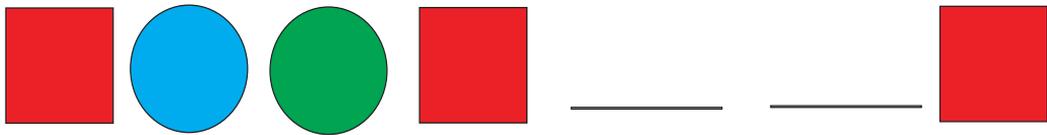
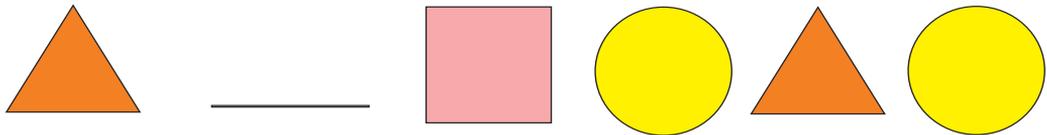
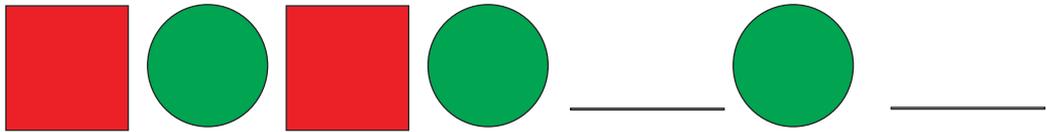


How many triangles, rectangles and squares are there respectively?

**Activity 9: Individually**

---

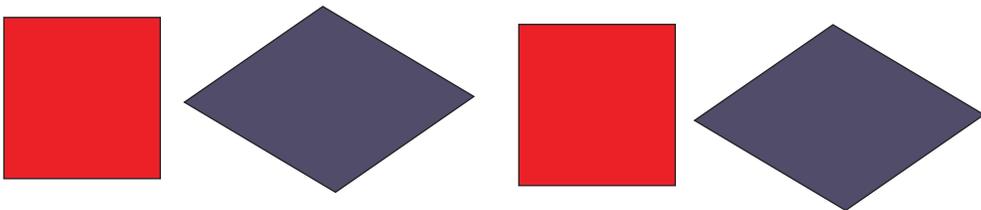
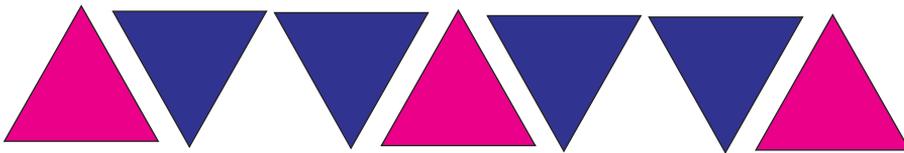
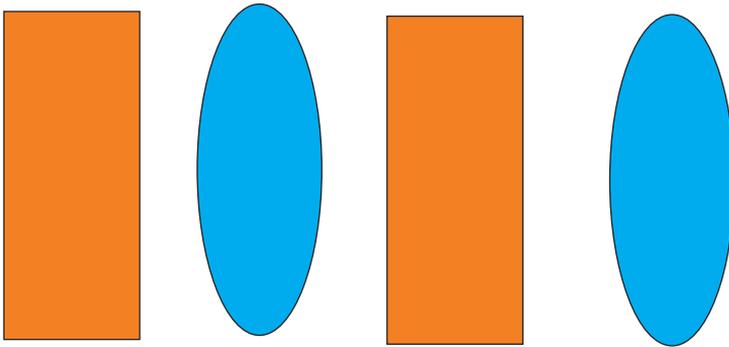
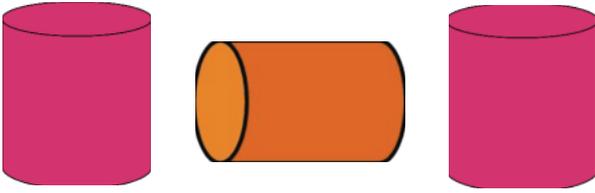
Look at the following patterns. Copy them in your exercise book. Draw the missing shape.



**Activity 10:** Individually

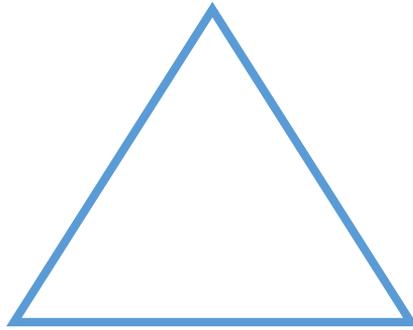
---

Copy the pattern. Draw the next shape.

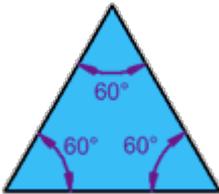


### 3.3 Properties of triangles

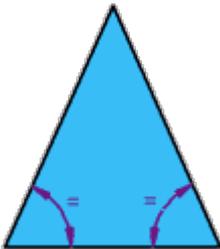
A triangle is a plane figure with three straight sides and three angles.



Types of triangles



Equilateral Triangle  
Three equal sides  
Three equal angles, always  $60^\circ$

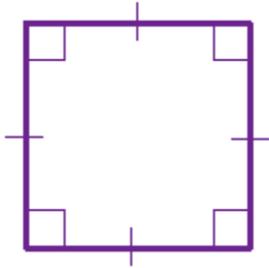


Isosceles Triangle  
Two equal sides  
Two equal angles



Scalene Triangle  
No equal sides  
No equal angles

### 3.4 Properties of a square

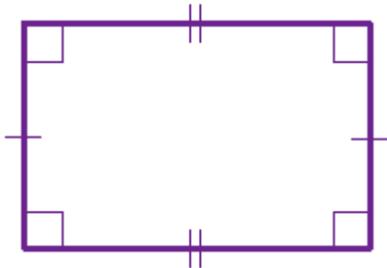


□ means "right angle"  
| show equal sides

#### Activity 11

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 12

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

