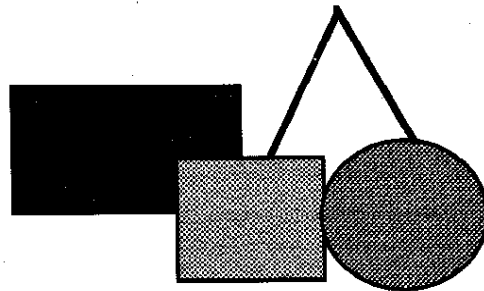


**Basic Competencies of
Learning in**

Mathematics



Grade Four

In the name of God, the gracious, the merciful

Introduction:

This booklet is one of a series of teacher resource books on Dari, Pashto and mathematics. These were developed in 1999 by a group of experienced Afghan educators to help teachers understand the universal basic competencies that primary education programs need to teach. The materials were developed based on various resource materials. In particular, they draw on existing Afghan primary textbooks.

The mathematics booklets are organized as follows:

- There are six booklets, one for each grade (1-6).
- Each booklet contains a full mathematics concept and skills framework for the full primary level. This framework can help teachers in different ways:
 - It helps teachers to understand how different math concepts are broken down into skills for each class level;
 - It helps teachers to understand how the different math concepts and skills need to be built up sequentially through the primary cycle;
 - It shows at which grade level new concepts and skills should be introduced.
- Each grade booklet then provides examples of all the math skills that need to be covered in the specific grade. The examples can help teachers as follows:
 - It ensures that all teachers understand the skills in the same way;
 - Teachers can use the examples to test whether children have learnt the skills;
 - Teachers can use the examples to develop extra practice material for children.

Not only teachers can use the materials. Teacher trainers can use the materials as well, for example to introduce the basic competencies, to teach subject content, and to help teachers develop low-cost teaching aids linked to the competencies. Supervisors can use the examples to test whether children are learning the basic competencies in mathematics. It is the hope of the developers that all Afghan educators will find the materials useful in their work with children.

Prepared by the representatives of the following organizations:

OI	Ockenden International
IRC	International Rescue Committee
AG-BASED	Afghan German Basic Education
SCA	Swedish Committee for Afghanistan
SAB	Solidarite Afghanistan Belgium
GTZ-BEFARE	GTZ-Basic Education for Afghan Refugees
AIL	Afghan Institute of Learning
CARE	Cooperative Assistance Relief Everywhere
PSD	Partners for Social Development
SCF-USA	Save the Children Federation -USA
CIC	Children in Crisis
NAC	Norwegian Afghanistan Committee
ECAR	Education Committee for Afghan Refugees
AMNA	Creation of the Pilot Schools in Afghanistan
HCI	Human Concern International
	Afghan Teachers and Schools Union in Quetta

Afghan Education
Basic Competencies of Learning in Mathematics May 1999

Math Concepts	I	II	III	IV	V	VI
Place Value	Pre number Concepts Tens; 1 - 99	Hundreds 100-999	Thousands: 1000- 100000	Millions 7 Digits Add and Sub.	Billions 8 - 10 digits Add and Sub.	Trillion 10 - 13 digits Add and Sub.
Addition and Subtraction	Addition & Subtraction of 1 - 99 and zero without carrying and borrowing	Addition & Subtraction till 999 and zero with carrying/borrowing up to tens	Whole numbers w/w/o borrow & carry Repeated addition	Review of multiplication Table		
Multiplication and Division			Multiplication and division by 1 to 9 and zero	Multiplication & division by 10s, 100s, 1000s w/o decimals Multiply/Devold by 2, 3 and four digits	Review multiplication and division	Review multiplication and division by 10s, 100s, 1000s with decimals
Fractions	Color 1/2 and 1/4 of figures	Matching fraction 1/2, 1/3, 2/3, 1/4, 2/4, 3/4 with figures	Identification of fraction (1/2, 1/3, 2/3, 1/4, 2/4, 3/4, 1/5, 2/5, 3/5, 4/5) with figures	Proper fractions Same denominator Compare Add Subtraction	Four operations on Fractions	Conversion of fractions to decimals and vice versa Compare
Decimals				Multiply/divide by 10s, 100s, 1000s with decimals Compare, add and subtract	Four operations on Decimals Application Ratio Percent	
Measurement	Comparison of short and long, big and small and thick and thin	span, fool, steps compare capacity of containers Time; months, days and hours	m, cm, kg Hours and minutes	Multiples and parts km, hm, dm, m m, dm, cm, mm Conversion without decimals	Multiples and parts km, hm, dm, m m, dm, cm, mm Conversion with decimals	Review m, dm, cm, mm with perimeter m^2 , dm^2 , cm^2 , mm^2 with areas of circle, triangle, rectangle and square
Money/Calendar	Coins and bills up to 100 Afs.	50 Afs. 100Afs And 500 Afs.	Review of 50, 100, 500 1000, 5000, 10,000 Afs.	Lunar Calendar	AD Calendar	

Class Four Math

Place Value up to 7 digits

The students will be able to:

- Write the following numbers in the table below and read them.

16,569
880,201
1,063,421
9,980,095

<i>Millions</i>			<i>Thousands</i>			<i>Ones</i>		
100 Milli ons	10 Milli ons	Milli on	100 Thou sands	10 Thou sands	Thou sands	Hund reds	Tens	Ones

- Add and write the number in standard form:
 $1,500,000 + 620,000 + 53,000 + 2,700 + 300 + 85 + 9$

- Write the number in expanded form:
975,851

- Arrange the following numbers in ascending order:
205,398 205,938 520,480 501,695 312
6,304,520 8,932,590 6,315,480 8,923,600 6,192,840

- Arrange the following numbers in descending order:
584,622 594,266 604,626 464,226
748,505 848,450 478,609 748,715

Multiplication and Division

6. Fill in the blanks in the following table:

×	1	2	3	4	5	6	7	8	9
0	0	0	0						
1			2				7		
2	2			8				16	
3			9			18			
4			8		20				36
5						30			
6		12					42		
7			21						
8					40				
9		18							81

7. Multiply the following numbers

$$\begin{array}{r} 876042 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 653210 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7980432 \\ \times 8 \\ \hline \end{array}$$

8. Multiply one digit numbers by 10, 100, 1000

$$4 \times 1 \text{ ten} = 4 \text{ tens} \quad \text{—————} \quad 4 \times 10 = 40$$

$$4 \times 1 \text{ hundred} = 4 \text{ hundreds} \quad \text{—————} \quad 4 \times 100 = 400$$

$$4 \times 1 \text{ thousand} = 4 \text{ thousands} \quad \text{—————} \quad 4 \times 1000 = 4000$$

9. Multiply two-digit numbers by 10, 100, 1000

	Thousands			Units		
	100 Thousands	10 Thousands	Thousands	Hundreds	Tens	Units
24×10				2	4	0
24×100			2	4	0	0
24×1000		2	4	0	0	0

10. Multiply the following numbers by counting the number of zeroes in the multiplier:

$$\begin{array}{r} 876042 \\ \times 70 \\ \hline \end{array}$$

$$\begin{array}{r} 653210 \\ \times 800 \\ \hline \end{array}$$

$$\begin{array}{r} 7980432 \\ \times 9000 \\ \hline \end{array}$$

11. Multiply two-digit numbers by two-digit numbers:

$$\begin{array}{r} 52 \\ \times 14 \\ \hline 208 \end{array} \leftarrow (4 \times 52)$$

$$\begin{array}{r} 52 \\ \times 14 \\ \hline 208 \\ 520 \end{array} \leftarrow (10 \times 52)$$

$$\begin{array}{r} 52 \\ \times 14 \\ \hline 208 \\ 520 \\ \hline 728 \end{array}$$

12. Multiply three-digit number by three-digit number:

$$\begin{array}{r} 528 \\ \times 186 \\ \hline 3168 \\ 42240 \\ 52800 \\ \hline 98208 \end{array}$$

$3168 \leftarrow (6 \times 528)$
 $42240 \leftarrow (80 \times 528)$
 $52800 \leftarrow (100 \times 528)$

13. Multiply four-digit number by four-digit number:

$$\begin{array}{r} 3214 \\ \times 2132 \\ \hline 6428 \\ 96420 \\ 321400 \\ 6428000 \\ \hline 6852248 \end{array}$$

$6428 \leftarrow (2 \times 3214)$
 $96420 \leftarrow (30 \times 3214)$
 $321400 \leftarrow (100 \times 3214)$
 $6428000 \leftarrow (2000 \times 3214)$

14. Multiply three-digit numbers with zero in the unit place:

$$\begin{array}{r} 690 \\ \times 312 \\ \hline 1380 \\ 6900 \\ 207000 \\ \hline 215280 \end{array}$$

$1380 \leftarrow (2 \times 690)$
 $6900 \leftarrow (10 \times 690)$
 $207000 \leftarrow (300 \times 690)$

15. Multiply three-digit numbers with zero in the tens place:

$$\begin{array}{r} 321 \\ \times 201 \\ \hline 321 \\ 0000 \\ 64200 \\ \hline 64521 \end{array}$$

$321 \leftarrow (1 \times 321)$
 $0000 \leftarrow (0 \times 321)$
 $64200 \leftarrow (200 \times 321)$

16. Multiply four-digit numbers with zeroes in the tens and hundreds place:

$$\begin{array}{r} 1024 \\ \times 2609 \\ \hline 9216 \leftarrow (9 * 1024) \\ 00000 \leftarrow (0 * 1024) \\ 14400 \leftarrow (600 * 1024) \\ 2048000 \leftarrow (2000 * 1024) \\ \hline 2671616 \end{array}$$

$$\begin{array}{r} 2102 \\ \times 1007 \\ \hline 14714 \leftarrow (7 * 2102) \\ 00000 \leftarrow (0 * 2102) \\ 000000 \leftarrow (0 * 2102) \\ 2102000 \leftarrow (1000 * 2102) \\ \hline 2116714 \end{array}$$

17. Multiply the following numbers:

$$\begin{array}{r} 210 \\ \times 312 \\ \hline \end{array}$$

$$\begin{array}{r} 205 \\ \times 150 \\ \hline \end{array}$$

$$\begin{array}{r} 3036 \\ \times 2032 \\ \hline \end{array}$$

$$\begin{array}{r} 3035 \\ \times 2302 \\ \hline \end{array}$$

18. Word Problem:

The fees at Habibia high school for class **4B** are set at **1450** Afghanis per year.

There are **35** children in the class.

How much money is collected from class **4B**?

Division

19. Divide three digit number by one-digit number:

$$684 \div 8 = \underline{\hspace{2cm}}$$

$$9432 \div 7 = \underline{\hspace{2cm}}$$

20. Divide three-digit number by two-digit number:

$$\begin{array}{r} \overset{\cdot\cdot}{27} \overline{) \overset{\cdot\cdot}{843}} \\ \underline{54} \\ 30 \end{array}$$

Is 30 less than 27?
No.

$$\begin{array}{r} \overset{\cdot\cdot}{27} \overline{) \overset{\cdot\cdot}{843}} \\ \underline{81} \\ 3 \end{array}$$

Is 3 less than 27?
Yes.

$$\begin{array}{r} \overset{\cdot\cdot}{27} \overline{) \overset{\cdot\cdot}{843}} \\ \underline{81} \\ 033 \\ \underline{27} \\ 6 \end{array}$$

Is 6 less than 27?
Yes.

To check the answer multiply the quotient by the divisor and add the remainder.

$$\text{Quotient} \times \text{Divisor} + \text{remainder} = \text{dividend}$$

$$31 \times 27 + 6 = 843$$

21. Word problem:

30 packets of sweets contain a total of 5280 sweets. How many sweets are there in each packet?

Division by 10, 100 and 1000

When a number is divided by 10, it moves one place to the right.

When a number is divided by 100, it moves two places to the right;

When a number is divided by 1000, it moves three places to the right.

	Thousands		Units				
	10 Thousands	Thousands	Hundreds	Tens	Units		
$48000 \div 10$		4	8	0	0	→	0 = 4800
$48000 \div 100$			4	8	0	→	00 = 480
$48000 \div 1000$				4	8	→	000 = 48

22. Divide 4 digit numbers by 3 digit numbers, 4 digit numbers by 4 digit numbers, 5 digit numbers by 4 digit numbers and 6 digit numbers by 3 digit numbers

$$\begin{array}{r}
 \begin{array}{c} \bullet \bullet \bullet \\ 217 \end{array} \overline{) \begin{array}{c} \bullet \bullet \bullet \bullet \\ 7595 \\ -651 \\ \hline 1085 \\ 1085 \\ \hline 0000 \end{array}} \\
 \hline
 \end{array}$$

$$\begin{array}{l}
 7595 \div 217 = 35 \\
 R = 0
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} \bullet \bullet \bullet \\ 409 \end{array} \overline{) \begin{array}{c} \bullet \bullet \bullet \bullet \bullet \\ 941087 \\ -818 \\ \hline 1230 \\ 1227 \\ \hline 38 \\ 00 \\ \hline 387 \\ 000 \\ \hline 387 \end{array}} \\
 \hline
 \end{array}$$

$$\begin{array}{l}
 941087 \div 409 = 2300 \\
 R \quad \underline{387} \\
 409
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} \bullet \bullet \bullet \bullet \\ 2000 \end{array} \overline{) \begin{array}{c} \bullet \bullet \bullet \bullet \bullet \bullet \\ 36000 \\ -2000 \\ \hline 16000 \\ 16000 \\ \hline 00000 \end{array}} \\
 \hline
 \end{array}$$

$$\begin{array}{l}
 36000 \div 2000 = 18 \\
 R 0
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{c} \bullet \bullet \bullet \bullet \bullet \\ 3504 \end{array} \overline{) \begin{array}{c} \bullet \bullet \bullet \bullet \bullet \\ 76392 \\ -3604 \\ \hline 32352 \\ 31536 \\ \hline 816 \end{array}} \\
 \hline
 \end{array}$$

$$\begin{array}{l}
 76392 \div 3504 = 19 \\
 R \quad \underline{816} \\
 3504
 \end{array}$$

$$\begin{array}{r}
 \\
 \\
 \\
 \hline
 921 \overline{) 12370} \\
 \underline{-000} \\
 1237 \\
 \underline{921} \\
 3160 \\
 \underline{2763} \\
 597
 \end{array}$$

$$\begin{array}{l}
 12370 \div 921 = 13 \\
 R \quad \underline{397} \\
 921
 \end{array}$$

23. Divide:

$$217 \overline{) 9575}$$

$$532 \overline{) 4265}$$

$$184 \overline{) 438027}$$

$$1253 \overline{) 219184}$$

Fractions

Even numbers

Any number multiplied by 2 gives an even number.

$$2 \times 1 = 2$$

$$2 \times 2 = 4$$

$$2 \times 7 = 14$$

Odd numbers

One added to any even number gives an odd number.

$$0 + 1 = 1$$

$$2 + 1 = 3$$

$$4 + 1 = 5$$

$$6 + 1 = 7$$

$$8 + 1 = 9$$

24. Use the table to fill in the blanks:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Even number

2		6		10		14		18	
---	--	---	--	----	--	----	--	----	--

Odd numbers

1		5			11			17	
---	--	---	--	--	----	--	--	----	--

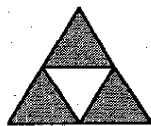
Prime numbers

2, 3, 5, 7, 11, 13, 17, 19 etc are prime numbers, because they are divisible only by themselves and one.

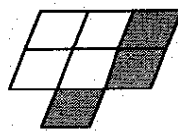
25. Write the fraction under each figures:



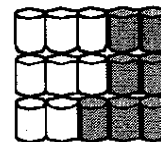
$\frac{2}{6}$



$\frac{3}{4}$



$\frac{3}{7}$



$\frac{7}{15}$

26. Write the following fractions in *descending* order:

$$\frac{2}{7}, \frac{6}{7}, \frac{4}{7}, \frac{3}{7} \quad \underline{\hspace{2cm}}$$
$$\frac{7}{8}, \frac{1}{8}, \frac{3}{8}, \frac{5}{8} \quad \underline{\hspace{2cm}}$$

27. Write the following fractions in *ascending* order:

$$\frac{3}{4}, \frac{3}{7}, \frac{3}{10}, \frac{3}{5} \quad \underline{\hspace{2cm}}$$
$$\frac{6}{10}, \frac{6}{7}, \frac{6}{8}, \frac{6}{9} \quad \underline{\hspace{2cm}}$$

Even numbers are divisible by 2:

Example: $\frac{\overset{2}{\cancel{12}}}{\underset{2}{\cancel{24}}}$ is reduced to $\frac{1}{6}$

Any number whose digits add up to a multiple of 3 is divisible by 3:

Example: $\frac{\overset{3}{\cancel{12}}}{\underset{3}{\cancel{18}}}$ is reduced to $\frac{4}{5}$

Any number with 5 or zero in the unit place is divisible by 5:

Example: $\frac{\overset{5}{\cancel{25}}}{\underset{5}{\cancel{125}}}$ is reduced to $\frac{1}{5}$

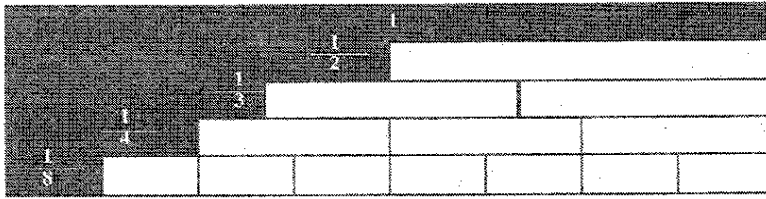
You can reduce a fraction by dividing the numerator and the denominator by the same number. This is called reduction of a fraction.

$$\frac{\overset{\textcircled{\div 5}}{5}}{\underset{\textcircled{\div 5}}{10}} = \frac{1}{2}$$

28. Reduce the following terms:

$$\frac{12}{30} \quad \frac{4}{12} \quad \frac{9}{27} \quad \frac{20}{30} \quad \frac{10}{25}$$

29. Look at the diagram and answer the questions:



How many $\frac{1}{2}$ are in 1 = _____

How many $\frac{1}{3}$ are in 1 = _____

How many $\frac{1}{4}$ are in 1 = _____

How many $\frac{1}{8}$ are in 1 = _____

30. Reduce and compare the following fractions by writing $<$, $>$ or $=$:

$\frac{1}{7}$ $\frac{14}{21}$

$\frac{1}{3}$ $\frac{6}{24}$

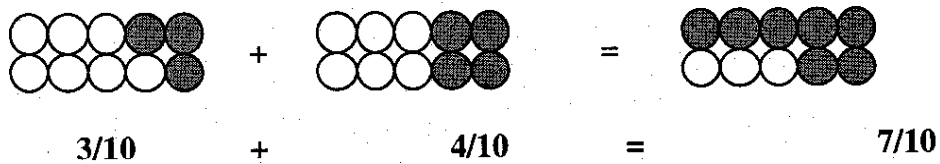
$\frac{1}{9}$ $\frac{27}{45}$

$\frac{45}{81}$ $\frac{36}{81}$

$\frac{5}{12}$ $\frac{3}{10}$

Addition of Fractions with like denominators

Example:



31. Add similar fractions with like denominators:

$\frac{4}{9} + \frac{5}{9} =$ _____

$\frac{4}{12} + \frac{7}{12} =$ _____

$\frac{3}{20} + \frac{14}{20} =$ _____

Subtraction fractions of similar or like denominator:

Example:

$$\frac{7}{8} - \frac{5}{8} = \frac{2}{8}$$

32. Reduce and subtract the following fractions

$$9/10 - 6/10 =$$

$$11/10 - 6/12 =$$

$$19/24 - 4/24 =$$

33. Word problem

Ahmad finished $1/8$ of his painting on Friday.
He finished $5/8$ of his painting on Saturday.
How much of the painting was finished by Saturday?

Measurement

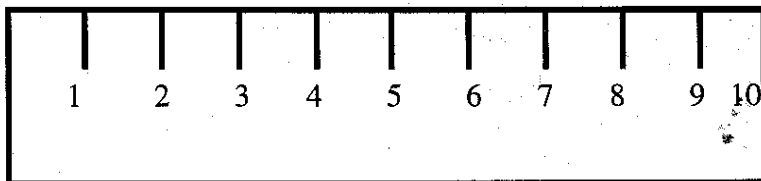
Length

Many countries use the unit Meter to measure length.

A meter has small parts: decimeter (dc), centimeter (cm), and millimeter (mm).

1m	=	10 cm
1m	=	100 cm
1m	=	1000mm

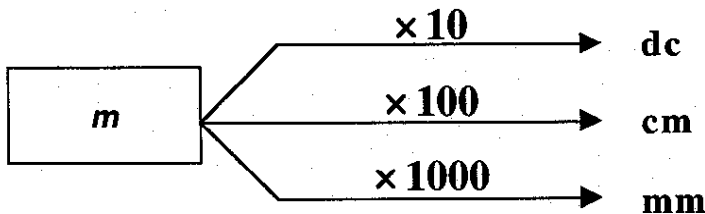
$1\text{dm} = 10\text{ cm}$



cm

dm

To convert from high low measure we multiply by multiples of 10.
To convert from a unit of a meter to its parts: dc, cm, and mm, we multiply by multiples of ten as indicated in the diagram below.



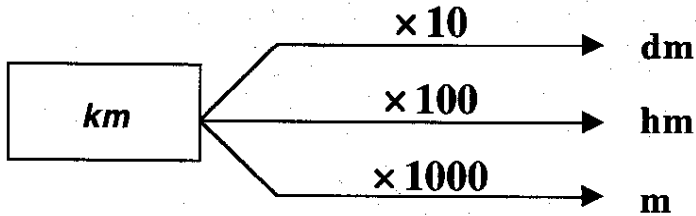
34. Change m into dm, cm, mm :

M	dm	cm	mm
8			
25			
170			

The multiples of a meter are:

10 m = 1 dm
100 m = 1 hm
1000 m = 1 km

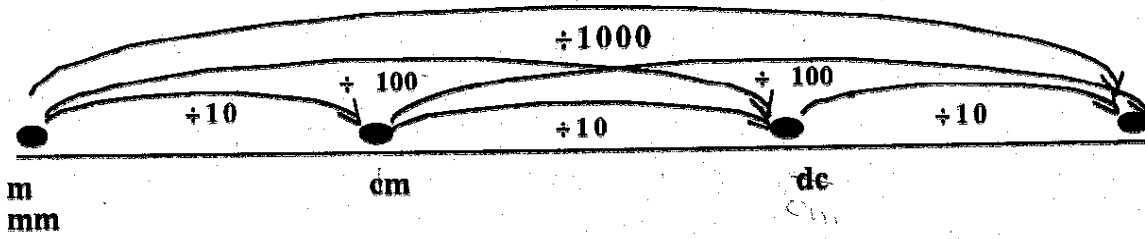
Decameter (dm)
Hectometer (hm)
Kilometer (km)



35. Change Km into Hm, Dkm, m:

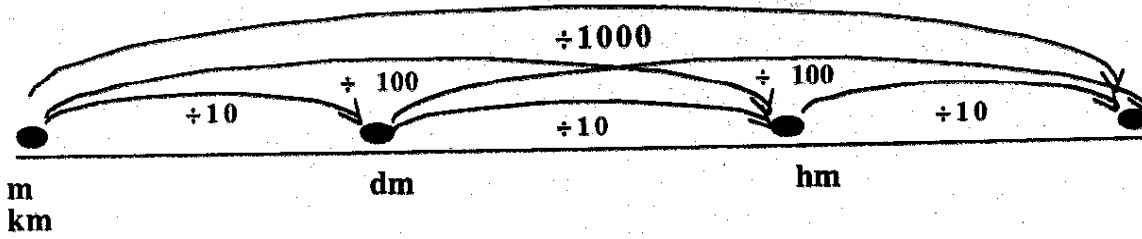
Km	hm	dm	m
7			
82			
326			

To convert from low to high measure we divide by multiples of 10.
 To convert from a unit of a meter to its decameter, hectometer, and kilometer, we divide by multiples of ten as indicated in the diagram below.



36. Complete the following table.

Mm	cm	dm	m
3000			
8000			
12000			



37. Complete the following table.

M	Dkm	Hm	Km
11000			
52000			
122000			

Calendar

Lunar Calendar

There are twelve months in one year.

Muharm-ul-Haram, Safar-ul-muzafar, Rabi-ul-Awal, Rabi-ul-Akhir, Jamadi-ul-Awal. Jamadi-ul-Akhir. Rajab-ul-Murajab. Sha'ban-ul-Mu'azm. Ramazan-ul-Mumbarak. Shawal-ul-Mukaram, Ziqadat-ul-Haram, Zil Hajat-ul-Haram,

The Present Lunar year is 1420

The lunar year has 354 days.

One week has seven days.

The days of the week are: Sat, Sun, Mon, Tue. Wed, Thurs, Fri.

Muharam-ul-Haram
Lunar 1420

Hamal, /Saur
Solar 1378

Thu.	Wed.	Tue	Mon	Tue.	Sat	Fri
7	4	5	4	3	2	1
14	13	12	11	10	9	8
21	20	19	18	17	16	15
28	27	26	25	24	23	22
					30	29

38. Answer these questions:

How many days are there in the month of Moharam? _____

On which date of Moharam Ashura was celebrated in Afghanistan? _____

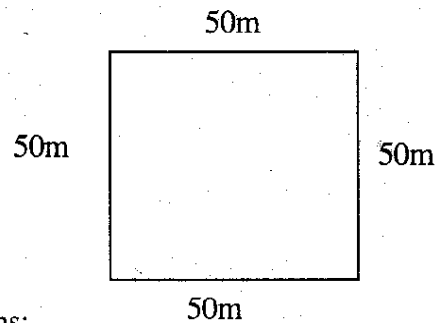
How many Saturdays are there in the month of Moharm? _____

The month of Moharam begins on the _____ of Hamal 1376.

Perimeter

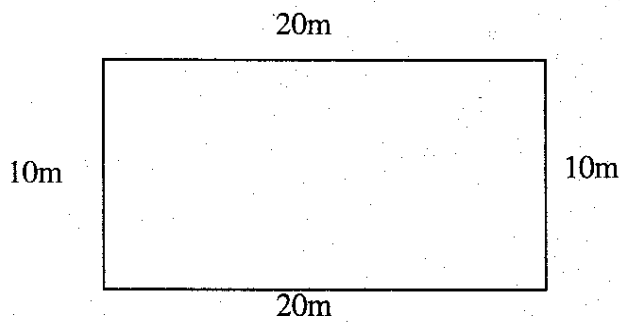
The perimeter of a shape is the distance around it.

39. Find the perimeter of a square garden when one of the sides is 50 meters long.

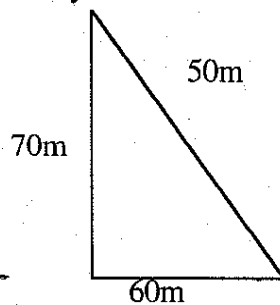


40. Solve the following problems:

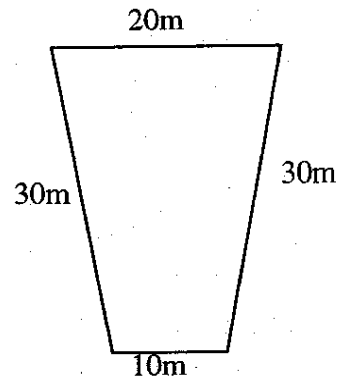
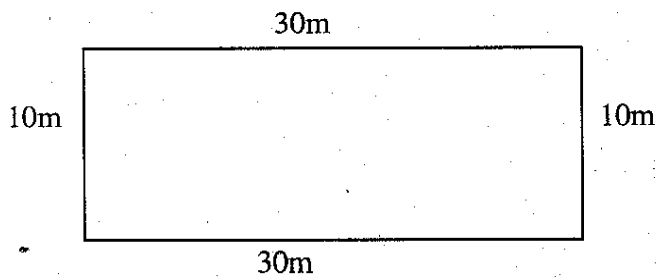
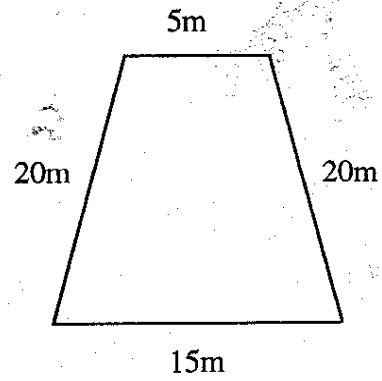
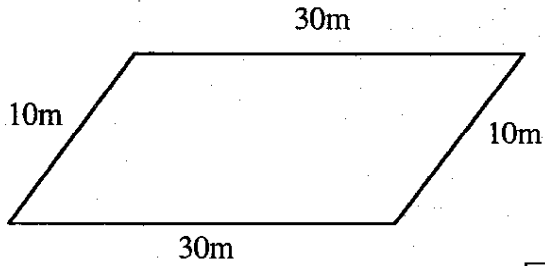
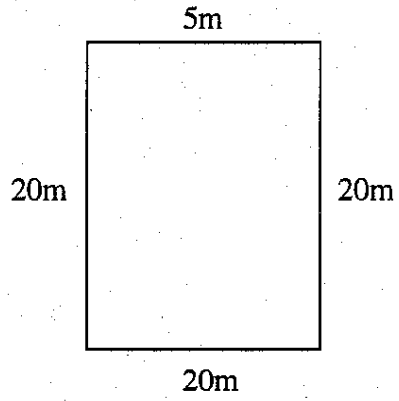
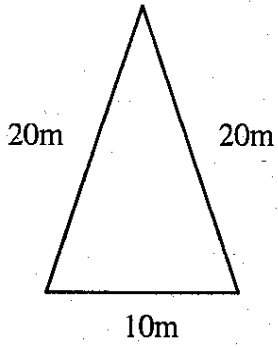
Ahmad bought a piece of land.
He wants to build a wall around it before building a house.
What is the length of the wall around the lot of land?



Najeeb has an apple garden which is triangle in shape.
He wants to build a fence around it.
How many meters of barbed wire will he need?



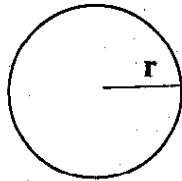
41. Calculate the perimeter of the following shapes and then compare them by writing $>$, $<$ or equal.



Perimeter of a circle

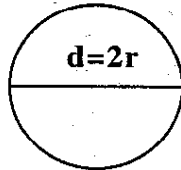
The Radius (r)

The radius of circle is the distance from the center of a circle to a point on the circumference of a circle.



Diameter (d)

The diameter of a circle is a distance across the circle through its center.



π

π is a constant number equal to $22/7$ used in measuring perimeter and area of a circle.

Perimeter

Perimeter of a circle is the distance around the circle.

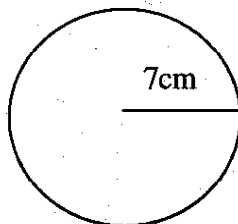
The perimeter of circle is:

$$D \times \pi$$

or

$$2r \times 22/7$$

42. Find the perimeter of the following circle:



Area

The amount of surface a shape covers is called its area.

The area is the number of squares inside the figure.

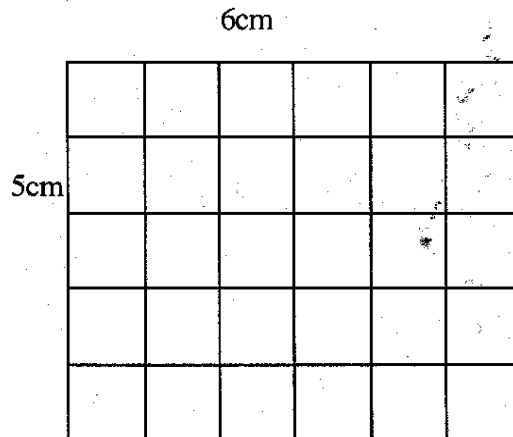
4c

1	2	3	4
5	6	7	8
9	10	11	12

4c
3c

The area of the above is $3m \times 4m = 12$ meter squares or 12 m^2 .

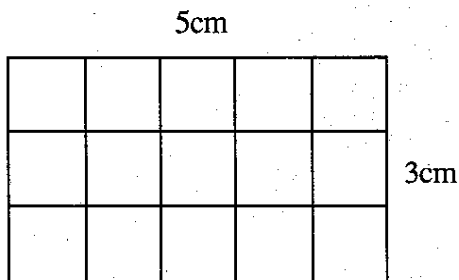
We can say that area of a figure is the number of squares that fit inside it.



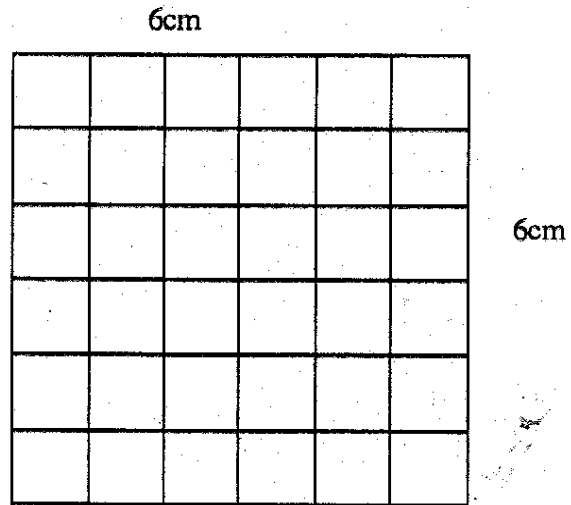
The area of a rectangle is calculated by the multiplying its length by its width.

$$\text{Area} = l \times w$$

43. Find the area of the following rectangle:



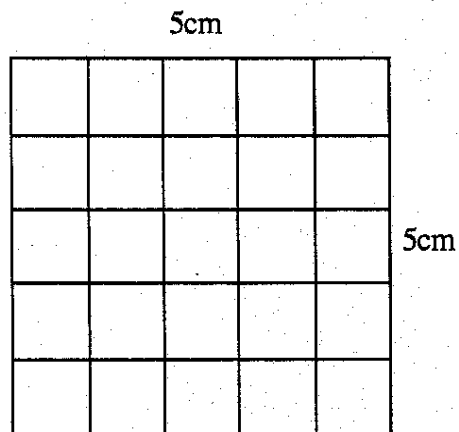
The area of a square is the number of squares inside it.



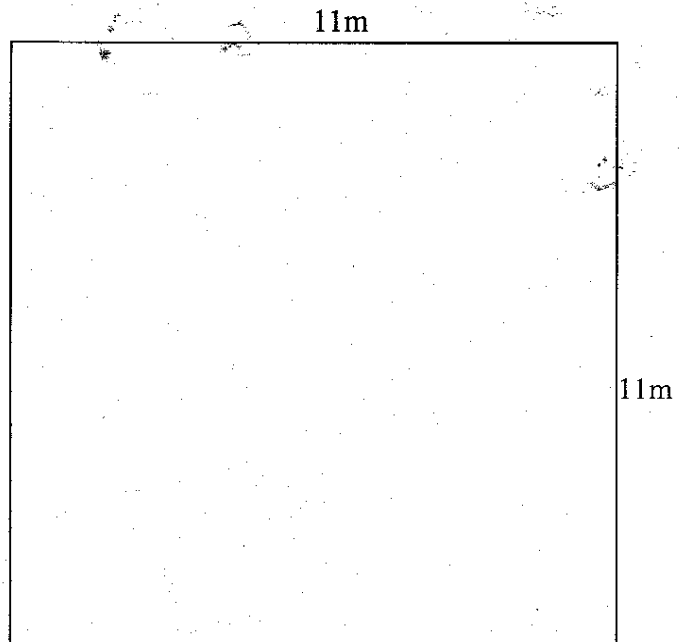
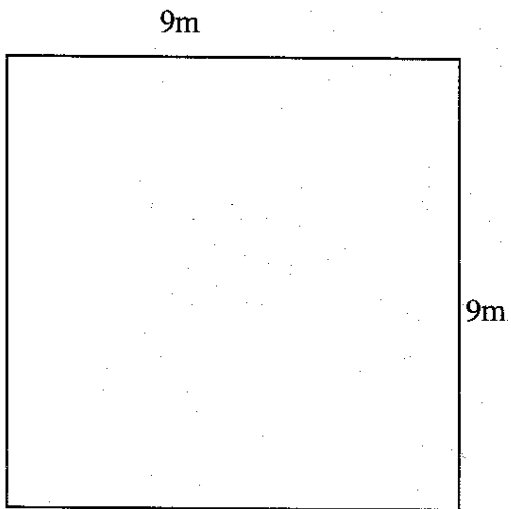
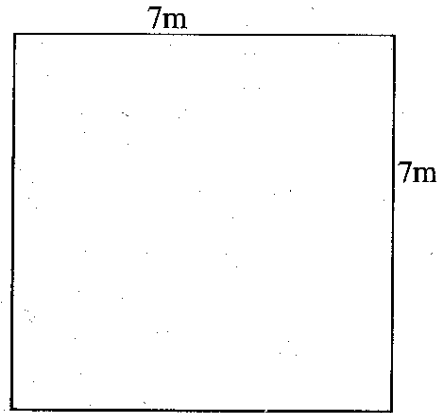
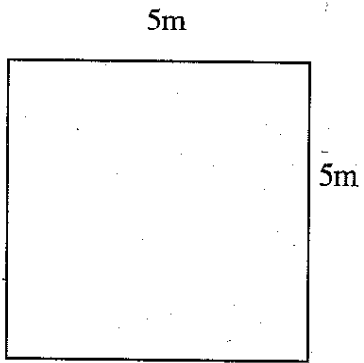
The area of a square is calculated by multiplying its sides.

$$\text{Area} = \text{side} \times \text{side}$$

44. What is the area of this square:

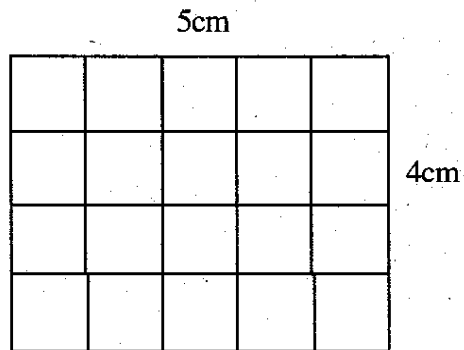


45. Calculate the areas of the following squares:

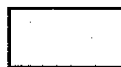
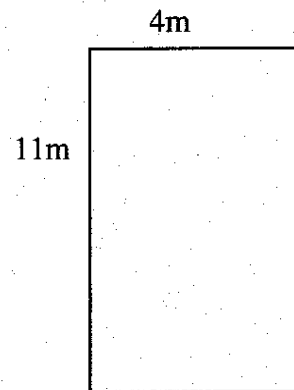
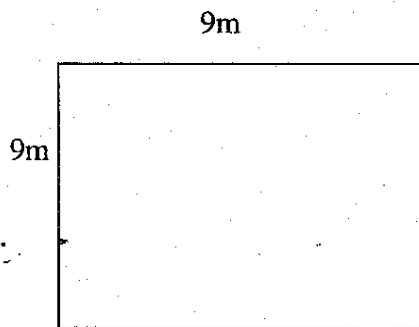
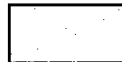
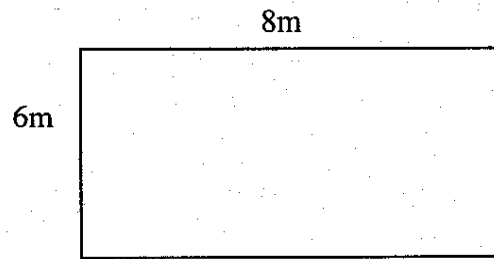
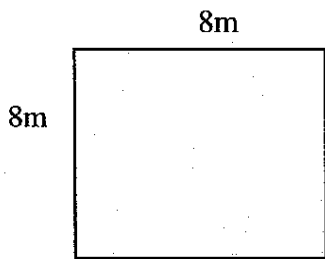


46. Solve the following problems:

Akram's family is putting in a new patio. The patio is 5m long and 4m wide what is the area of the patio?



47. Compare the areas of the following lawns by writing $>$, $<$ and $=$



48. Solve the following problems:

Halim has a field 5 km Long and 4 km wide.
Find the area of Halim's field.

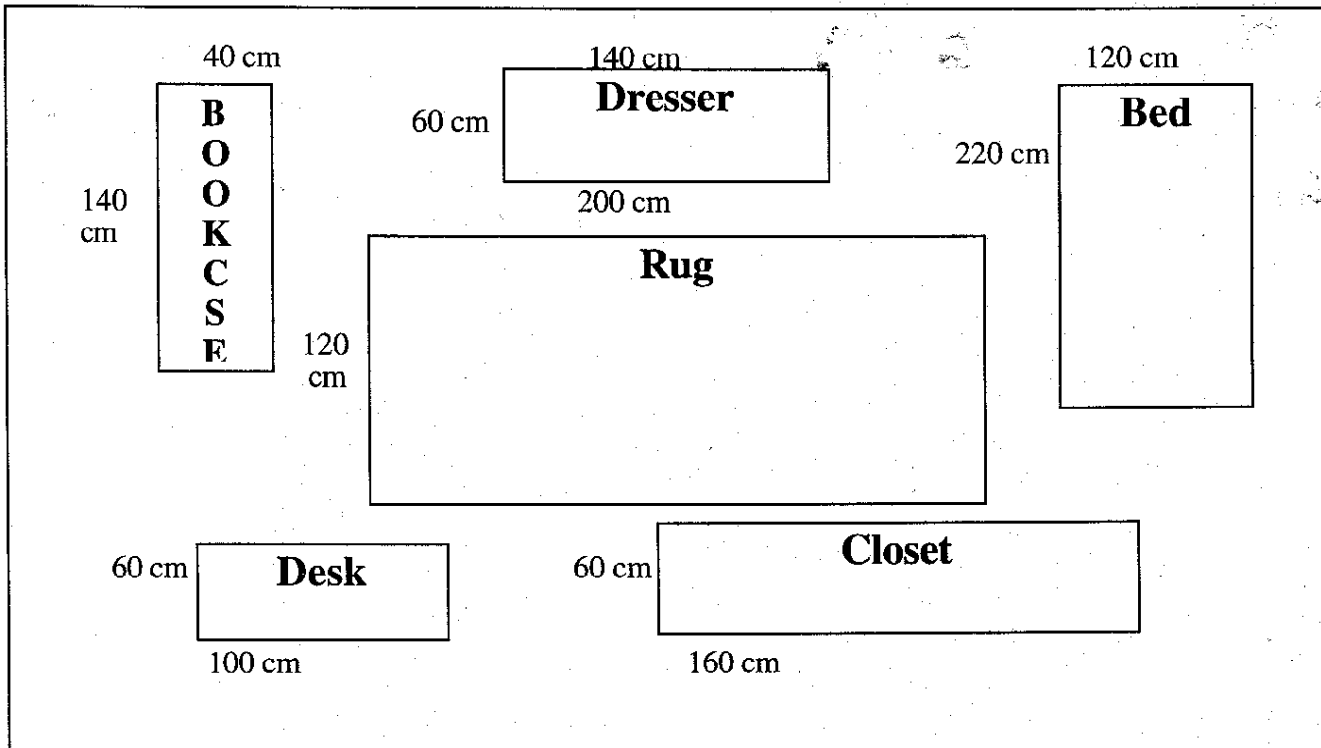
Najeeb has a square garden. Each side of the garden is 9 km long.
Find the area of Najeeb's garden.

Compare the areas of Halim's field and Najeeb's garden by using $>$ $<$ or $=$.

The area of Halim's field

The area of Najeeb's garden

49. Ahmad has bought some things for his living room as shown in the figure below.
Study the figure below and answer the following questions.



What is the area of the bookcase? _____

What is the area of the desk? _____

Which item has the greatest area? _____

Which item has the greatest perimeter? _____

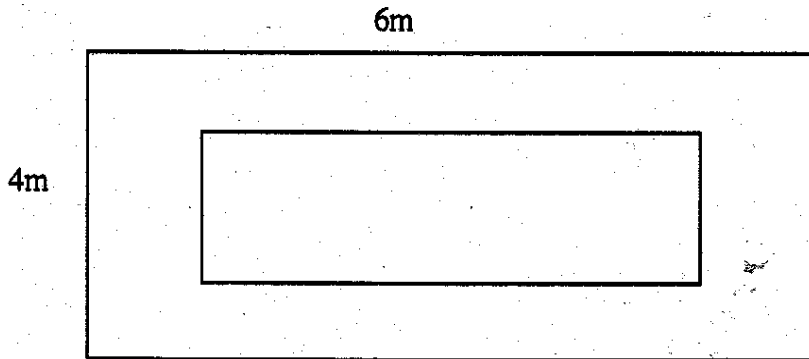
50. Word problem

Ahmad wants to buy a piece of carpet for his room.

The length of the room is 6m and the width is 4m.

He wants to leave one-meter space on each side and cover the remaining room.

What would be the area of the carpet that Ahmad needs to buy.



Length and Width of a Rectangle and a Square

To find the width or the length of a rectangle or square we divide the area by the length or width.

$$\text{Width} = \text{area} \div \text{length}$$

Example:

$$\text{Area} = 96\text{m}^2$$

$$\text{Length} = 12\text{m}$$

$$\text{Width} = 96 \div 12 = 8\text{m}$$

$$\text{Length} = \text{area} \div \text{width}$$

Example:

$$\text{Area} = 81\text{ cm}^2$$

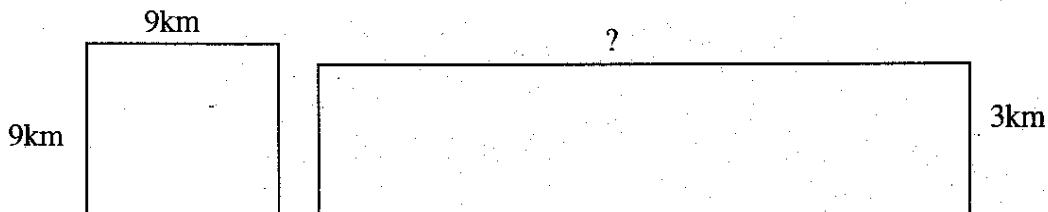
$$\text{Width} = 3\text{cm}$$

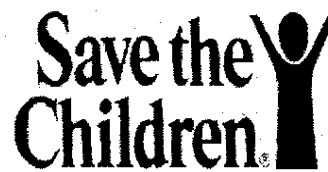
$$\text{Length} = 81 \div 3 = 27\text{cm}$$

51. Complete the following table:

Length	Width	Area
20cm		100cm ²
	6cm	54cm ²
10cm	22cm	
	3cm	36cm ²
13km	11km	

52. Find the length of a rectangle that has the same area as the given square.





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