Spark of Math

Answer Key

Book 2

Dar
GHAD AL AJYAL
For Publishing & Distributing

Fourth Edition
2024

Spark of Math

Answer Key
Book 2

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قرر مجلس التربية والتعليم اعتماد الكتاب منهاجًا إضافيًا بموجب قرار رقم (2019/155)، في جلسة رقم (6)، بتاريخ (2019/12/2).

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Contents

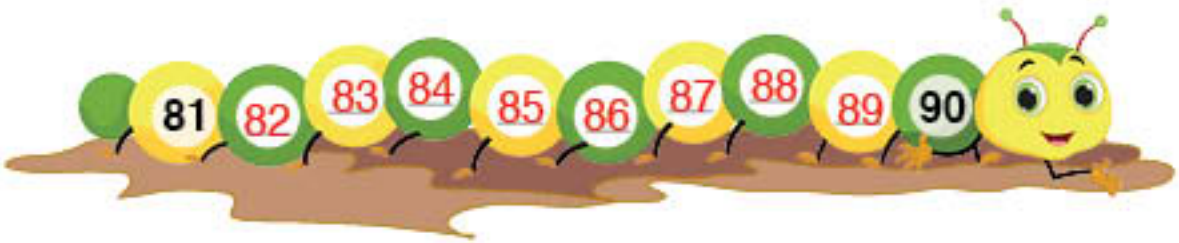
What I Know about Math

1. Complete the numbers.


51 52 53 54 55 56 57 58 59 60


61 62 63 64 65 66 67 68 69 70


71 72 73 74 75 76 77 78 79 80


81 82 83 84 85 86 87 88 89 90


91 92 93 94 95 96 97 98 99 100

2. Write the numbers that comes before, between, or after.

44	45	46
17	18	19
62	63	64
55	56	57
97	98	99
79	80	81

3. Match the clocks to their times.



It's 4 o'clock.

It's 6 o'clock.

It's 7 o'clock.

4. Complete the ordinal numbers.

First Second Third Fourth Fifth Sixth

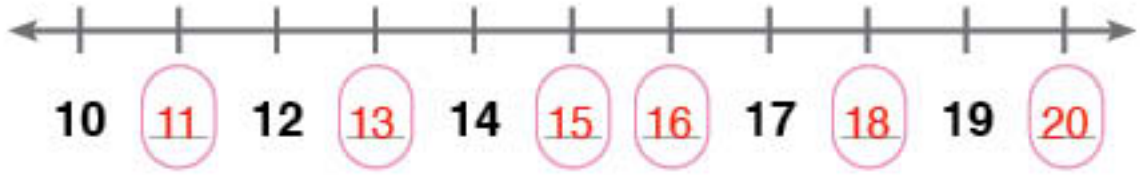
Seventh Eighth Ninth Tenth

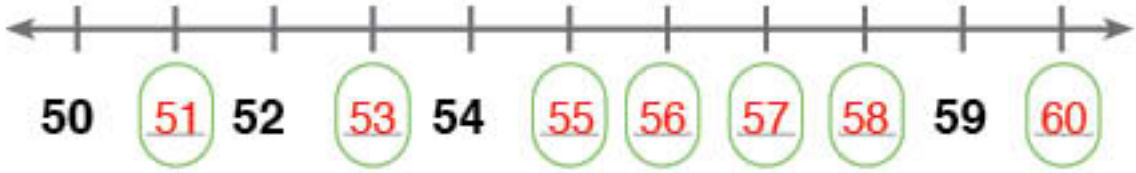
5. Complete the missing days of the week.

Sunday Monday Tuesday

Wednesday Thursday Friday Saturday

6. Complete the number lines.

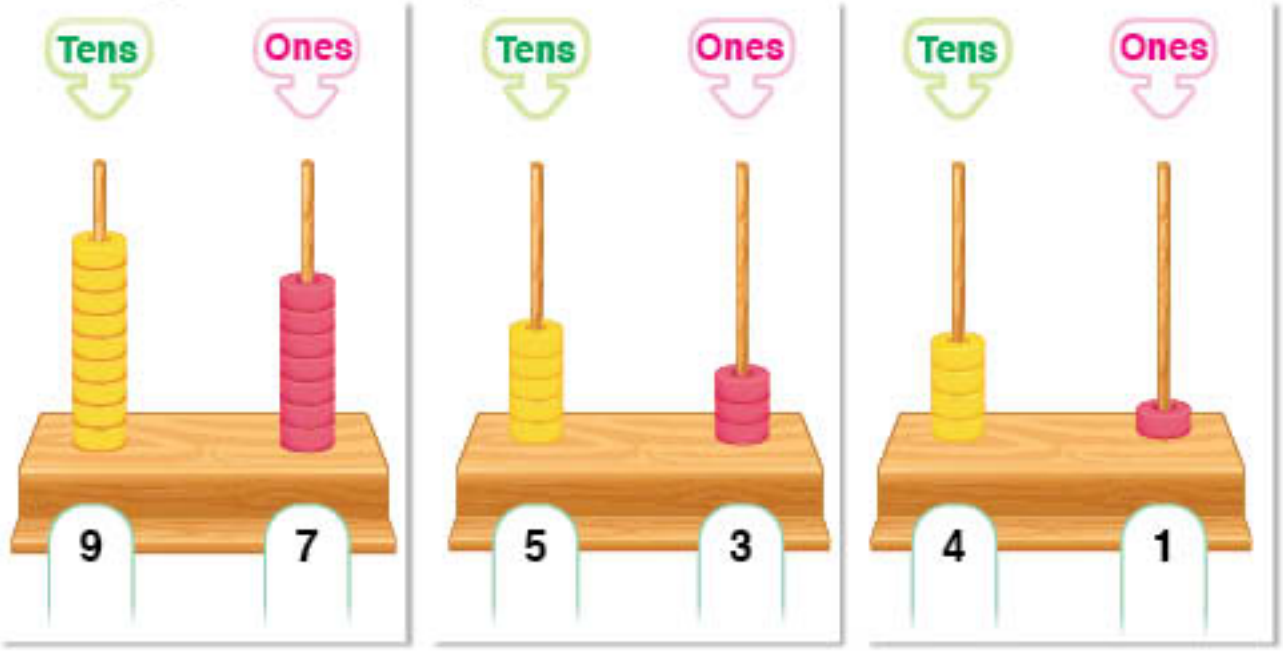




7. Write the missing numbers.

10	20	30	40	50	60	70	80	90

8. Draw the beads on the abacus to represent the given numbers, following the first example.



Unit 1

3-Digit Numbers

Vocabulary

- ones
- tens
- hundreds
- ascending order
- descending order
- even numbers
- odd numbers
- abacus

Objectives

Upon completion of this unit, you will be able to:

- Count numbers with three digits.
- Read and write numbers in words up to 999.
- Compare and arrange 3-digit numbers.
- Recognize even and odd numbers.

(1-1) 3-Digit Numbers

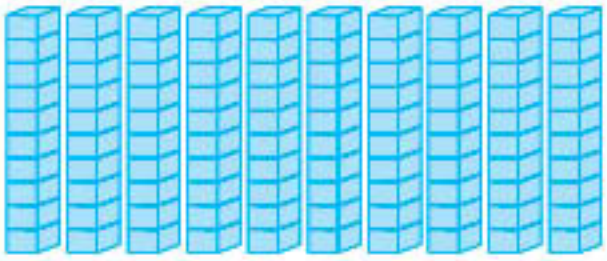
Three-digit numbers are divided into units of hundreds, tens, and ones.

Always start analyzing from the far right.

Example: 352 is a three-digit number.

hundreds	tens	ones
3	5	2

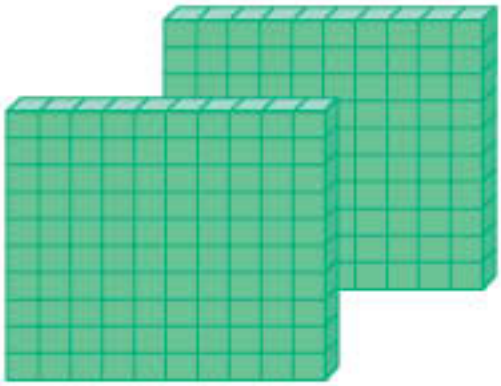
3-digit numbers start with 100 and go up to 999.



10 tens = **1 hundred**

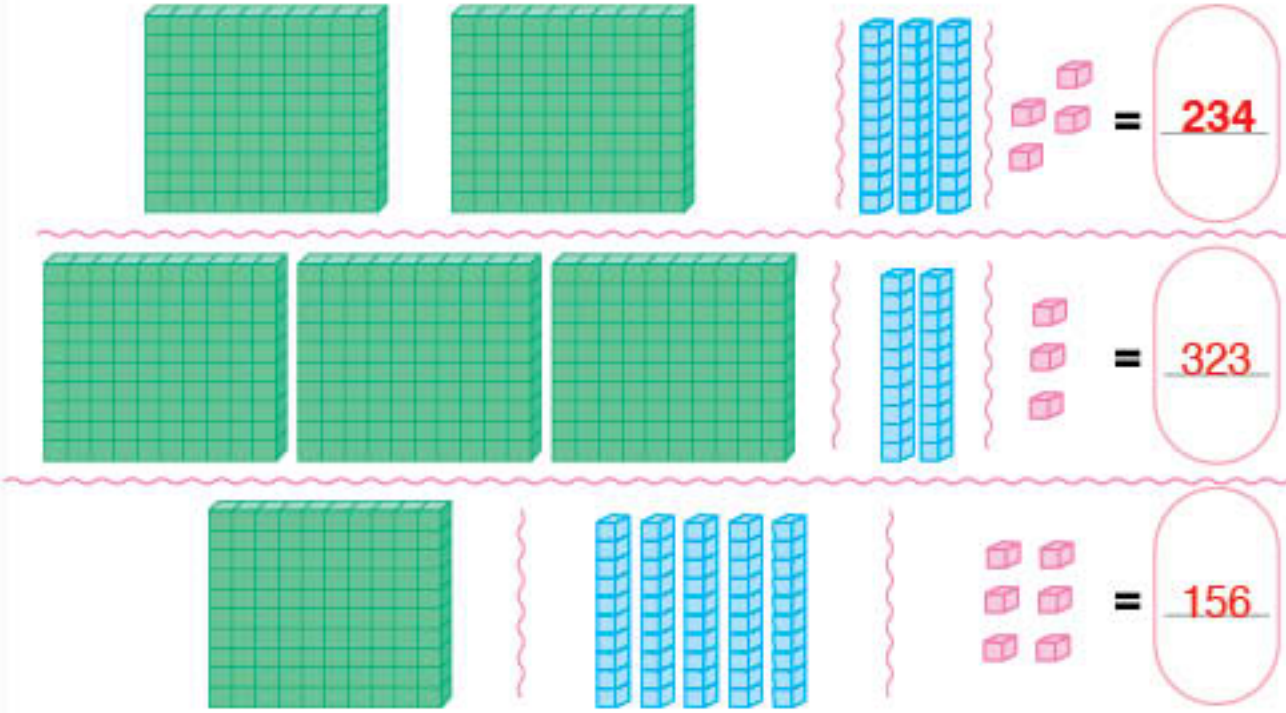
We can show the number 241 using block models.

Hundreds	Tens	Ones
2	4	1

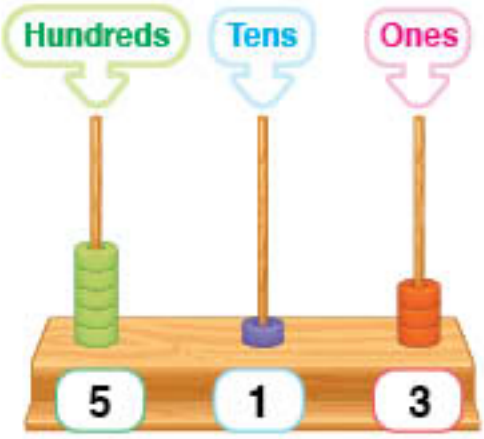


= 241 (Two hundred and forty-one)

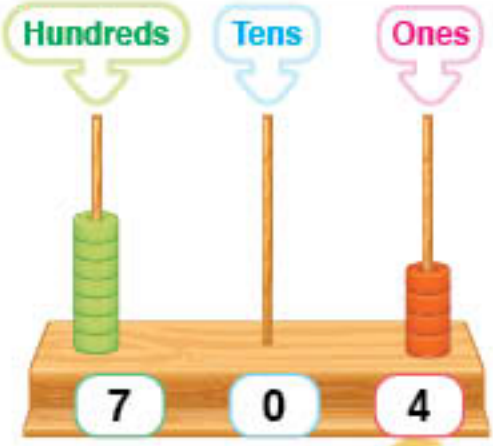
1. Count and write the 3-digit numbers.



We can draw the beads on the abacus for any 3-digit number.

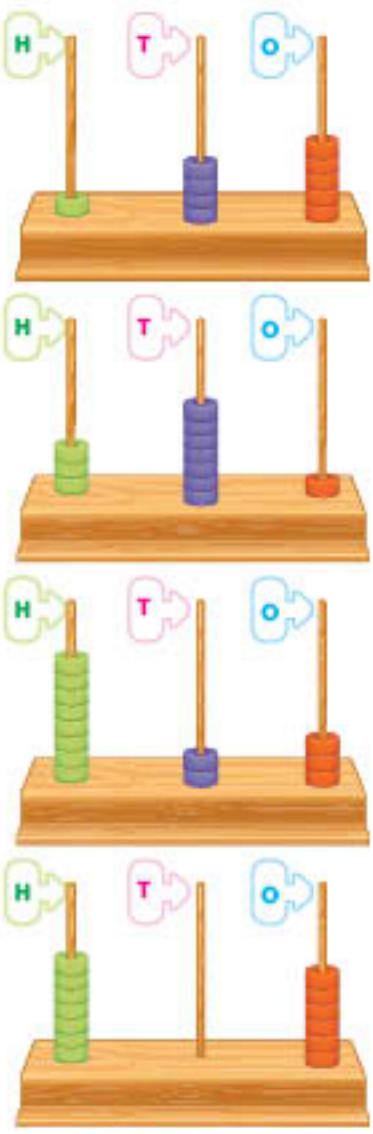


2. Draw the beads on the abacus for the number 704.



3. Complete the chart, and then draw the beads on each adjacent abacus to represent the given three-digit numbers.

Number	Hundreds H	Tens T	Ones O
145	1	4	5
371	3	7	1
823	8	2	3
706	7	0	6



4. Write the value of the digits that correspond to each place named.

452	731	890	460	900
Ones	Hundreds	Tens	Ones	Hundreds
2	700	90	0	900

(1–2) Numbers in Words up to 999

Look and recognize the words for the numbers in the hundreds.

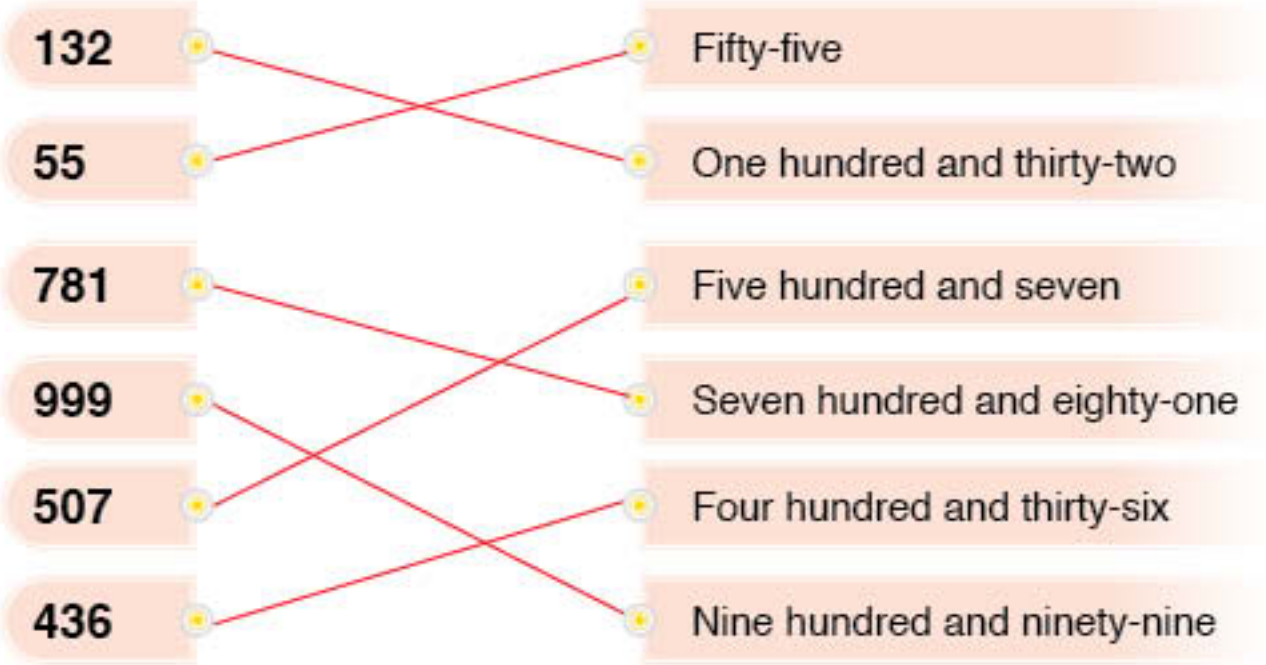
100 One Hundred	200 Two Hundred	300 Three Hundred	400 Four Hundred	500 Five Hundred
600 Six Hundred	700 Seven Hundred	800 Eight Hundred	900 Nine Hundred	

How to Read Numbers

- **145: One hundred and forty-five**
- **960: Nine hundred and sixty**
- **713: Seven hundred and thirteen**

To read 3-digit numbers, start reading numbers from left to right.

1. Match each number with the correct number word.



2. Circle the correct numbers.

A	Two hundred and eighty-three	283	382
B	Four hundred and twelve	421	412
C	Six hundred and seventeen	671	617
D	Nine hundred and ninety-five	995	959

Your Work

Collect one number word from each column to create your own number, then write it in the box.

Two hundred	thirty	six
Nine hundred	twenty	five
Five hundred	seventy	one

My number is Students' own answers .

eg., Two hundred and twenty-one

(1–3) Comparing Numbers

Remember that my mouth is **always** open to the **greater** number!

Examples:

350  250

588  894

666 = 666

The symbol (>) means greater than.
$56 > 40$

The symbol (<) means less than.
$24 < 30$

To compare numbers, first line up the digits of each number, then compare starting from the left.

Example (1): Compare 452 and 651.
Each number has 3 digits, so compare starting from the left.
Since 4 is less than 6, $452 < 651$.

452
651

Example (2): Compare 763 and 743.
Each number has 3 digits, so compare starting from the left.
Since the hundreds are equal, move to the tens.
Since 6 is greater than 4, $763 > 743$.

763
743

1. Write the correct sign (>, <, or =).

200	<	300	122	<	212
670	>	183	711	>	546
543	>	244	556	<	656
625	>	550	300	<	500
720	=	720	287	<	351

2. Circle the greatest numbers.

(413 / 314 / 143)	(721 / 700 / 701)
(300 / 310 / 301)	(821 / 823 / 832)

We can arrange numbers in ascending or descending order.

Ascending order means arranging numbers from the smallest to the greatest.

Descending order means arranging numbers from the greatest to the smallest.

Example (1):

Arrange 589, 958, 855, and 623 in ascending order.

The ascending order is:

589	623	855	958

Example (2):

Arrange 589, 958, 855, and 623 in descending order.

The descending order is:

958	855	623	589

Your Work

1. Arrange in ascending order.

625	321	584	965
321	584	625	965

325	235	252	322
235	252	322	325

2. Arrange in descending order.

585	978	785	654
978	785	654	585

218	475	312	865
865	475	312	218

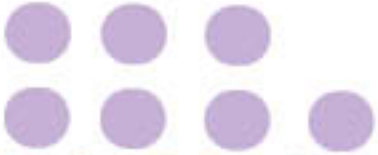
(1-4) Even and Odd Numbers

Look at the picture and recognize the even and odd numbers.

Even	Odd
0	1
2	3
4	5
6	7
8	9

- An even number is a number that has pairs.
- An odd number is a number that can't have pairs.

1. Count the circles. Write the numbers. Circle odd or even.

	4	odd / (even)
	5	(odd) / even
	7	(odd) / even
	8	odd / (even)

2. Circle the right answers (odd or even).

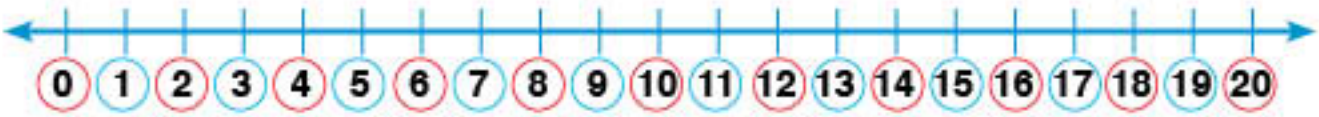
To find the answer, look at the ones digit.

10 →	(odd / even)	21 →	(odd / even)
13 →	(odd / even)	22 →	(odd / even)
15 →	(odd / even)	16 →	(odd / even)
19 →	(odd / even)	27 →	(odd / even)
18 →	(odd / even)	24 →	(odd / even)

We can analyze even and odd numbers by using the number line.

The odd number comes after the even number.

3. Circle even numbers with red and odd numbers with blue.



Your Work

In the circles, write the even numbers and the odd numbers less than 10.

- **Even numbers:** 0 2 4 6 8
- **Odd numbers:** 1 3 5 7 9

(1-5) Problem Solving

1. **Ammar's basketball team won the playoff this year. Their final score was a 3-digit number. There were 2 in the ones place, 5 in the tens place, and 1 in the hundreds place. What was their score?**

152

2. **Alaa and Mariam have rock collections. Alaa has 362 rocks, and Mariam has 329. Who has the greatest collection of rocks?**

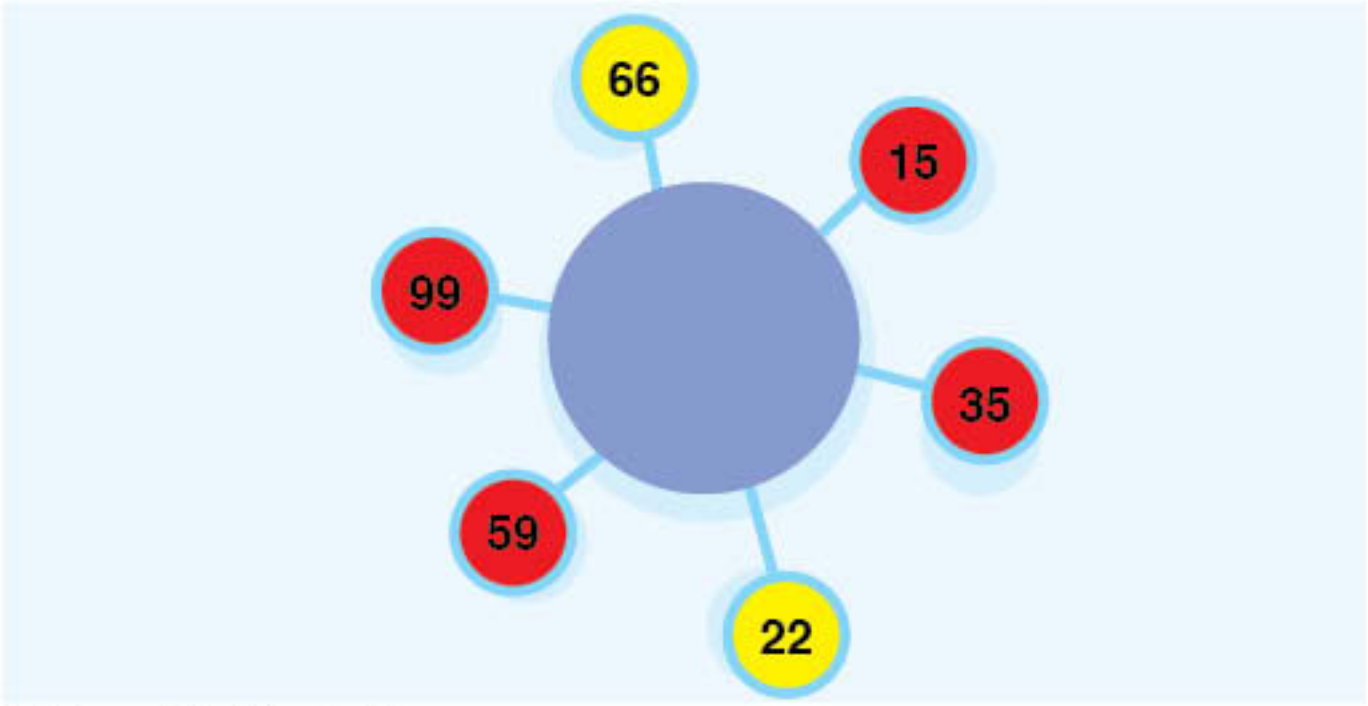
Alaa

3. **Lina rolled a die and got 5, 6, and 3. What is the greatest number she can have with those three digits?**

653

Show Your Turn

1. Color the odd numbers red and the even numbers yellow.



2. Complete the table.

Number	Hundreds	Tens	Ones
302	3	0	2
985	9	8	5
125	1	2	5

3. Write the value of the underlined numbers.

5̲24	61̲9	85̲0
500	9	50
13̲7	2̲06	43̲5
30	200	5

4. Write the numbers in words.

120 One hundred and twenty

300 Three hundred

921 Nine hundred and twenty-one

505 Five hundred and five

5. Write >, <, or = in the ( ).

554	>	455	961	=	961	854	>	513
650	>	252	581	>	521	665	>	562

Your Work

Write four 3-digit numbers, then arrange them in ascending order.

Students' own answers

eg.,

The 3-digit numbers			
791	973	123	425

The ascending order			
123	425	791	973

Unit 2
Working with 2- and 3-Digit Numbers

Vocabulary

- add
- addition
- addend
- sum
- subtract
- subtraction
- minuend
- subtrahend
- difference
- regrouping

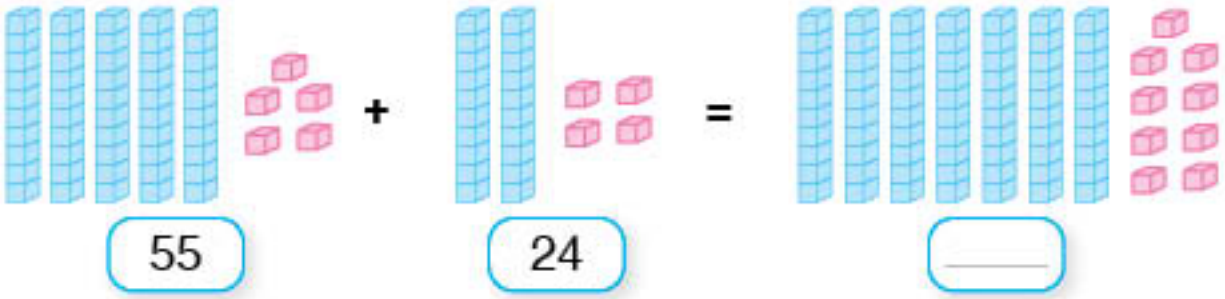
Objectives

Upon completion of this unit, you will be able to:

- Add 2- and 3-digit numbers without regrouping.
- Add 2- and 3-digit numbers with regrouping.
- Subtract 2- and 3-digit numbers without regrouping.
- Subtract 2- and 3-digit numbers with regrouping.

(2-1) Adding 2-Digit Numbers

Adding Numbers without Regrouping



55 + 24 = ___

55 → addend

+ 24 → addend

□ → sum

First, add the ones.

$$\begin{array}{r} 55 \\ +\ 24 \\ \hline 9 \end{array}$$

Then, add the tens.

$$\begin{array}{r} 55 \\ +\ 24 \\ \hline 79 \end{array}$$

1. Add.

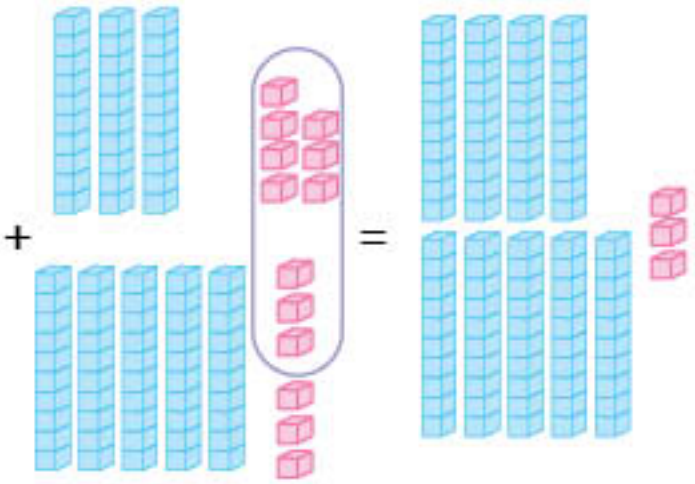
$\begin{array}{r} 83 \\ +\ 10 \\ \hline 93 \end{array}$	$\begin{array}{r} 59 \\ +\ 30 \\ \hline 89 \end{array}$	$\begin{array}{r} 25 \\ +\ 41 \\ \hline 66 \end{array}$
$\begin{array}{r} 44 \\ +\ 34 \\ \hline 78 \end{array}$	$\begin{array}{r} 26 \\ +\ 42 \\ \hline 68 \end{array}$	$\begin{array}{r} 73 \\ +\ 24 \\ \hline 97 \end{array}$

Adding Numbers with Regrouping

37 → addend

+ 56 → addend

□ → sum



First, add the ones.

$$\begin{array}{r} {\scriptstyle 1} \\ 37 \\ +\ 56 \\ \hline 3 \end{array} \qquad \begin{array}{r} 7 \\ +\ 6 \\ \hline 13 = 10 + 3 \end{array}$$

Then, add the tens.

$$\begin{array}{r} {\scriptstyle 1} \\ 37 \\ +\ 56 \\ \hline 93 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 3 \\ +\ 5 \\ \hline 9 \end{array}$$

1. Add.

$$\begin{array}{r} {\scriptstyle 1} \\ 29 \\ +\ 52 \\ \hline 81 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 27 \\ +\ 45 \\ \hline 72 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 68 \\ +\ 06 \\ \hline 74 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 55 \\ +\ 35 \\ \hline 90 \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 36 \\ +\ 44 \\ \hline 80 \end{array}$$

2. Add.

1 79 + 14 93	1 45 + 26 71	1 14 + 37 51	1 25 + 46 71	1 18 + 59 77

3. Complete the answers.

A $15 + 21 = 36$

B $26 + 59 = 85$

4. Write two numbers with the sum (74).

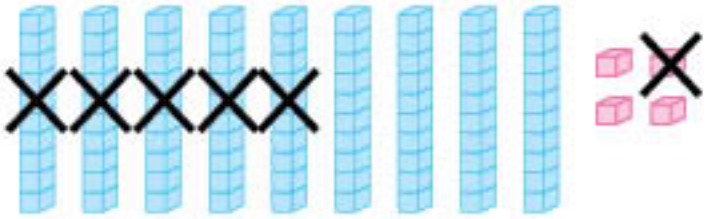
Students' own answers

eg., 50+24 = 74

(2-2) Subtracting 2-Digit Numbers

Subtracting Numbers without Regrouping

94 → minuend
- 51 → subtrahend
□ → difference



First, subtract the ones.

94
- 51
3

Then, subtract the tens.

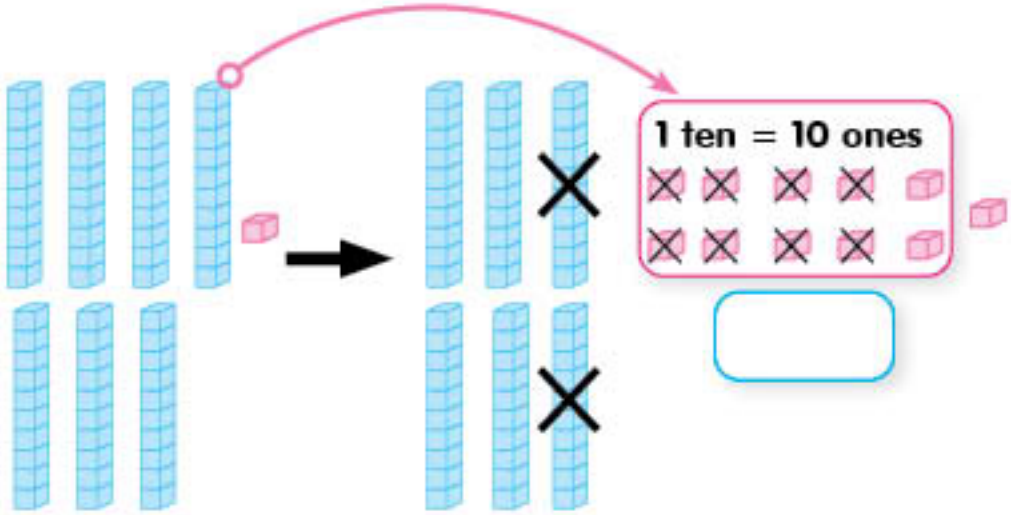
94
- 51
43

1. Subtract.

85 - 52 = 33	65 - 11 = 54	76 - 54 = 22
97 - 35 = 62	48 - 18 = 30	63 - 40 = 23

Subtracting Numbers with Regrouping

$$\begin{array}{r} 71 \\ -\ 28 \\ \hline \square \end{array}$$



First, subtract the ones.

$$\begin{array}{r} {\scriptstyle 6\ 11} \\ \cancel{7}\cancel{1} \\ -\ 28 \\ \hline 3 \end{array}$$

Regroup 71

71 = 70 + 1

= 60 + 11

then, 11 - 8 = 3

Then, subtract the tens.

$$\begin{array}{r} {\scriptstyle 6\ 11} \\ \cancel{7}\cancel{1} \\ -\ 28 \\ \hline 43 \end{array}$$

1. Subtract.

$$\begin{array}{r} {\scriptstyle 5\ 15} \\ \cancel{6}\cancel{5} \\ -\ 57 \\ \hline 08 \end{array}$$

$$\begin{array}{r} {\scriptstyle 0\ 16} \\ \cancel{1}\cancel{6} \\ -\ 08 \\ \hline 08 \end{array}$$

$$\begin{array}{r} {\scriptstyle 8\ 12} \\ \cancel{9}\cancel{2} \\ -\ 45 \\ \hline 47 \end{array}$$

$$\begin{array}{r} 83 \\ -\ 10 \\ \hline 73 \end{array}$$

$$\begin{array}{r} 59 \\ -\ 37 \\ \hline 22 \end{array}$$

$$\begin{array}{r} {\scriptstyle 5\ 15} \\ \cancel{6}\cancel{5} \\ -\ 59 \\ \hline 06 \end{array}$$

2. Subtract.

74 - 14 60	6 11 ~~7~~ ~~1~~ - 62 09	3 17 ~~4~~ ~~7~~ - 38 09

Your Work

1. Write two numbers with a difference of 46.

Students' own answers

eg., 84 - 38 = 46

2. Write two numbers with the difference of an odd number.

Students' own answers

eg., 23 - 10 = 13

(2-3) Adding and Subtracting 3-Digit Numbers

Adding 3-Digit Numbers

183 + 266 =

First, add the ones.

$$\begin{array}{r} 183 \\ +\ 266 \\ \hline \end{array} \qquad \begin{array}{r} 183 \\ +\ 266 \\ \hline 9 \end{array}$$

Second, add the tens.

$$\begin{array}{r} {\scriptstyle 1}\,183 \\ +\ 266 \\ \hline 49 \end{array}$$

$8 + 6 = 10 + 4$

14

Then, add the hundreds.

$$\begin{array}{r} {\scriptstyle 1}\,183 \\ +\ 266 \\ \hline 449 \end{array}$$

1. Add.

$$\begin{array}{r} {\scriptstyle 1}\,342 \\ +\ 108 \\ \hline 450 \end{array} \qquad \begin{array}{r} 224 \\ +\ 125 \\ \hline 349 \end{array} \qquad \begin{array}{r} 432 \\ +\ 313 \\ \hline 745 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1\,1}\,577 \\ +\ 384 \\ \hline 961 \end{array} \qquad \begin{array}{r} {\scriptstyle 1\,1}\,799 \\ +\ 138 \\ \hline 937 \end{array} \qquad \begin{array}{r} {\scriptstyle 1}\,801 \\ +\ 119 \\ \hline 920 \end{array}$$

Subtracting 3-Digit Numbers

651 - 347 =

First, subtract the ones.

651
- 347

4 11
65~~1~~
- 347
4

Second, subtract the tens.

4 11
6~~5~~1
- 347
04

Then, subtract the hundreds.

4 11
6~~5~~1
- 347
304

1. Subtract.

11
2 ~~3~~ 15
~~3~~25
- 167
158

232
- 121
111

13
5 ~~3~~ 14
~~6~~44
- 477
167

7 12
9~~8~~2
- 409
573

6 13
~~7~~37
- 480
257

999
- 876
123

2. Add or subtract.

77 + 62 = 139	64 + 31 = 95	59 - 47 = 12	80 - 70 = 10
84 - 14 = 70	108 - 72 = 36	160 - 98 = 62	103 - 83 = 20
	42 + 73 = 116	37 + 89 = 126	400 - 257 = 143

(2-4) Problem Solving

1. **Adam read 29 pages on Saturday and 19 pages on Sunday. How many more pages did he read on Saturday?**

$$29 - 19 = 10$$

2. **Rita sold 117 apples, 113 oranges, and 197 pears. How many pieces of fruit did she sell altogether?**

$$117 + 113 + 197 = 427$$

3. **There are 62 elephants in the herd; 42 are female. How many males are in the herd?**

$$62 - 42 = 20$$

4. Rita had 13 marbles. She gave 7 marbles to Tony. How many marbles are left?

$$\begin{array}{r} 13 \\ -\ 7 \\ \hline 06 \end{array}$$

5. There are 17 students present in class 6T. 13 left early for sports. How many students remain in the room?

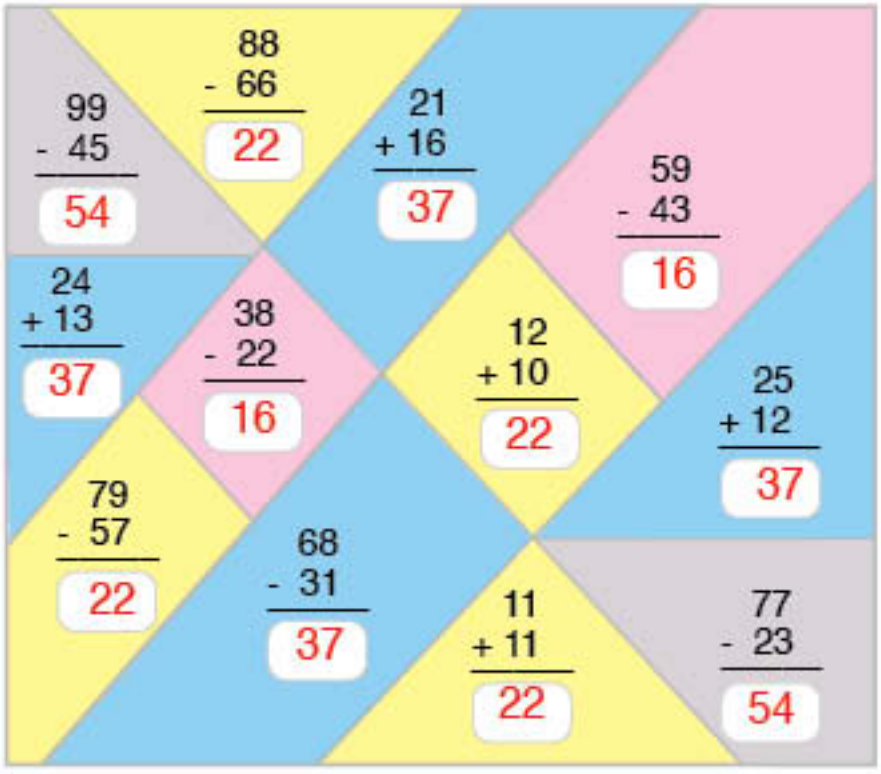
$$\begin{array}{r} 17 \\ -\ 13 \\ \hline 04 \end{array}$$

6. Jemma had 74 coins. She spent 20 coins on a football. How many coins are left?

$$\begin{array}{r} 74 \\ -\ 20 \\ \hline 54 \end{array}$$

Show Your Turn

1. Add or subtract. Use the key to color the spaces.



16	Pink
22	Yellow
37	Blue
54	Gray

Unit 3
Multiplication and Division

Vocabulary

- multiplication
- multiply
- multiplication table
- repeated addition
- multiplier
- multiplicand
- product
- division
- divide
- divisor
- dividend
- quotient
- division sentence

Objectives

Upon completion of this unit, you will be able to:

- Explain the relationship between multiplication and addition.
- Practice multiplication facts up to 5×10.
- Explain the relationship between division and multiplication.
- Define dividend, divisor, and quotient.
- Perform simple division exercises.

(3-1) Understanding Multiplication

Learn:
3 → multiplier
2 → multiplicand
6 → product

Multiplication is a repeated addition.

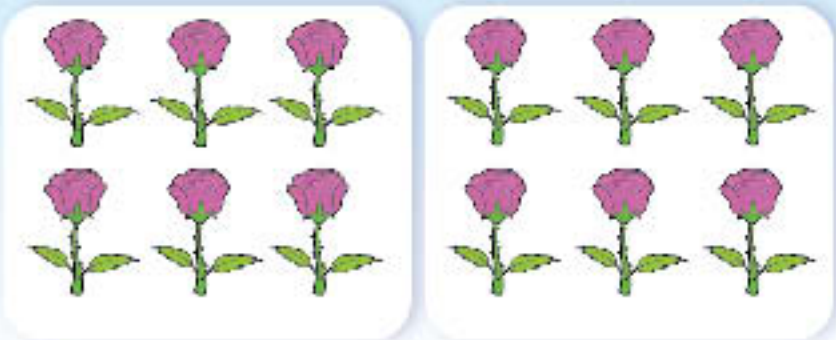
$= 3 \times 2 =$ 6

$= 4 \times 3 =$ 12

1. Count and write the numbers.

5 + 5 + 5 + 5 = 20

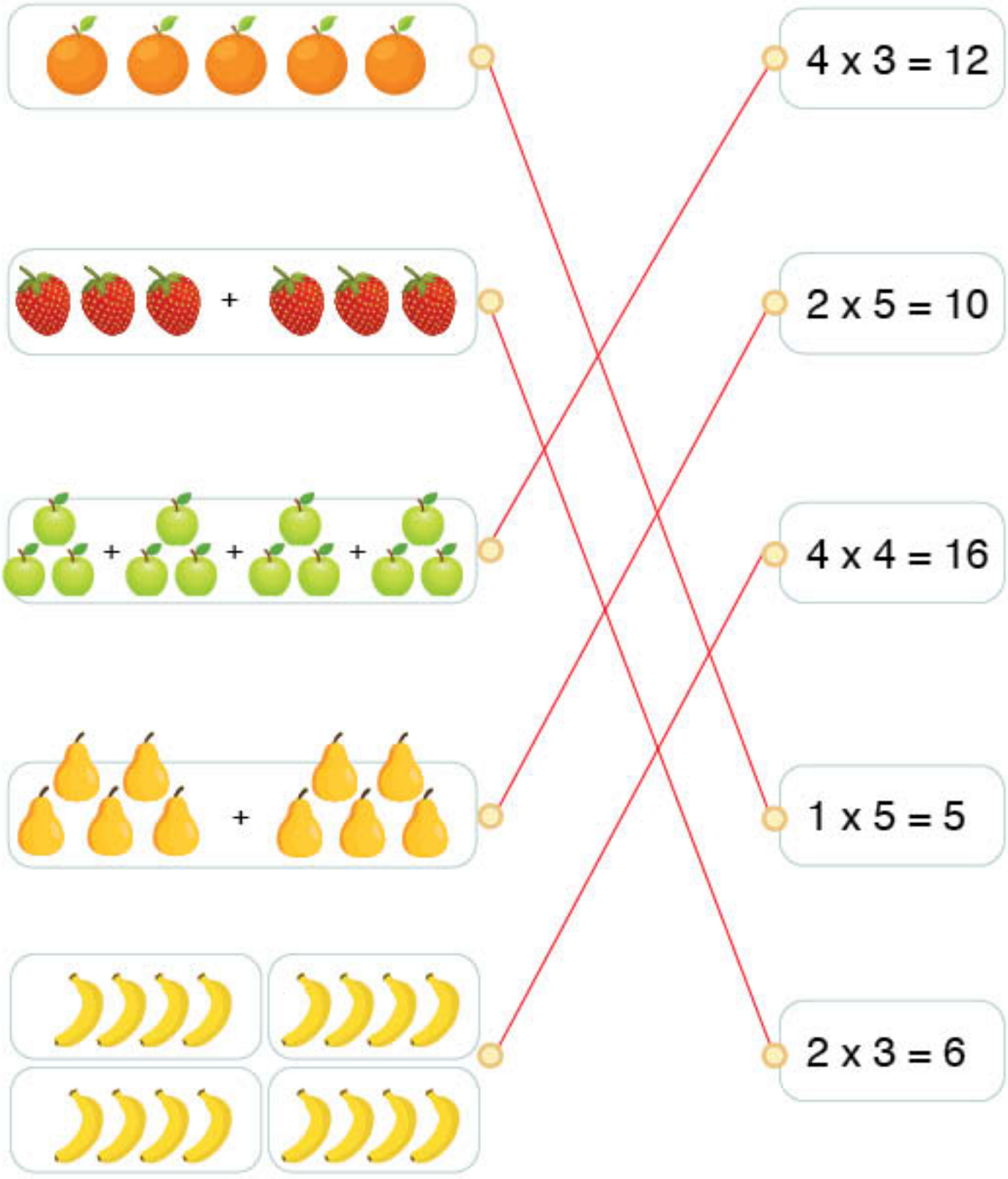
Or 4 × 5 = 20



6 + 6 = 12

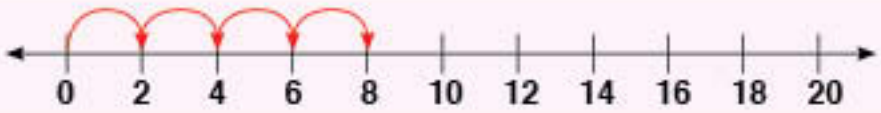
Or 2 × 6 = 12

2. Match.

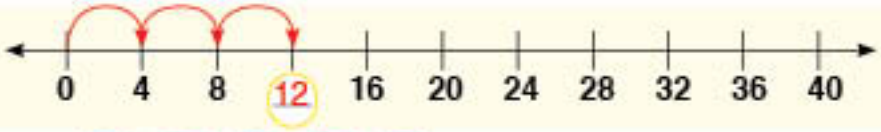


3. Use the number lines to find each multiplication's product.

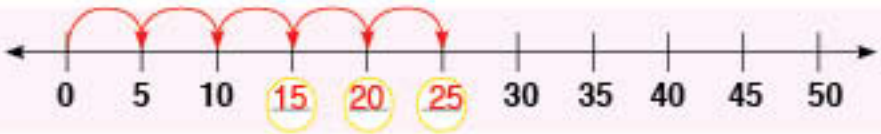
4 x 2 = 8



3 x 4 = 12



5 x 5 = 25



4 x 3 = 12

5 x 6 = 30

4. Multiply.

$$\begin{array}{r} 3 \\ \times\ 6 \\ \hline 18 \end{array} \qquad \begin{array}{r} 6 \\ 6 \\ +\ 6 \\ \hline 18 \end{array} \qquad \begin{array}{r} 2 \\ \times\ 9 \\ \hline 18 \end{array} \qquad \begin{array}{r} 9 \\ +\ 9 \\ \hline 18 \end{array} \qquad \begin{array}{r} 5 \\ \times\ 1 \\ \hline 5 \end{array} \qquad \begin{array}{r} 5 \\ +\ 0 \\ \hline 5 \end{array}$$

Your Work

1. Draw the story for (3 x 9).

9 + 9 + 9 = 27

2. What is the difference between 4 × 2 and 2 × 4?

4 + 4 = 8

2 + 2 + 2 + 2 = 8

(3-2) Multiplication up to 5×10

We can memorize the multiplication facts for any number by studying the multiplication table.

Multiplication Table

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50

$$\begin{array}{r} 4 \\ \times\ 7 \\ \hline 28 \end{array}$$

→ Find the 4th row.

→ Find the 7th column.

→ The product

1. Circle the right answers.

3 × 3 =		3 × 8 =		4 × 9 =		5 × 7 =	
(9)	6	13	(24)	32	(36)	(35)	30

2. Fill in the blanks.

4 × 5 = 20

3 × 9 = 27

3 × 10 = 30

2 × 4 = 8

3. Complete the multiplication table.

×1	×2	×3	×4	×5
1×1= 1	1×2= 2	1×3= 3	1×4= 4	1×5= 5
2×1= 2	2×2= 4	2×3= 6	2×4= 8	2×5= 10
3×1= 3	3×2= 6	3×3= 9	3×4= 12	3×5= 15
4×1= 4	4×2= 8	4×3= 12	4×4= 16	4×5= 20
5×1= 5	5×2= 10	5×3= 15	5×4= 20	5×5= 25
6×1= 6	6×2= 12	6×3= 18	6×4= 24	6×5= 30
7×1= 7	7×2= 14	7×3= 21	7×4= 28	7×5= 35
8×1= 8	8×2= 16	8×3= 24	8×4= 32	8×5= 40
9×1= 9	9×2= 18	9×3= 27	9×4= 36	9×5= 45
10×1= 10	10×2= 20	10×3= 30	10×4= 40	10×5= 50

Your Work

Draw a multiplication story for the number 30.

3 x 10 = 30

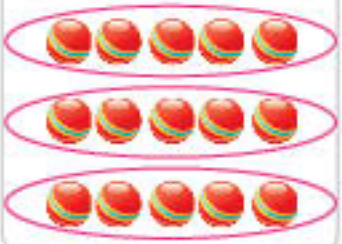
10 + 10 + 10 = 30

(3-3) Understanding Division

If we want to distribute the number 15 to three equal groups,

15 is the number of all.

3 is the number of groups.



5 is the number of items in each group.

5

Learn:

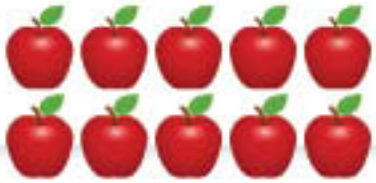
15 ⟶ dividend

3 ⟶ divisor

5 ⟶ quotient

So ⟶ **15 ÷ 3 = 5**

1. Draw, then write.



10 ÷ 2 = 5

12 ÷ 3 = 4

4 ÷ 1 = 4

2. Fill in the blanks.

12 ÷ 2 = 6	Since	2 × 6 = 12
16 ÷ 4 = 4	Since	4 × 4 = 16
18 ÷ 2 = 9	Since	2 × 9 = 18
24 ÷ 3 = 8	Since	3 × 8 = 24

3. Divide.

8 ÷ 2 = 4	8 ÷ 4 = 2	10 ÷ 5 = 2
10 ÷ 2 = 5	15 ÷ 3 = 5	15 ÷ 5 = 3
14 ÷ 2 = 7	14 ÷ 7 = 2	16 ÷ 2 = 8
16 ÷ 8 = 2	35 ÷ 5 = 7	5 ÷ 1 = 5
9 ÷ 1 = 9	3 ÷ 1 = 3	8 ÷ 1 = 8

Your Work

Draw a story showing (32 ÷ 4).

32 ÷ 4 = 8 since 4 x 8 = 32

(3-4) Problem Solving

1. Rami visited a store to buy 2 flash drives.
   They were priced at 4 JD each.
   What is the total price of both flash drives?

   $2 \times 4 = 8$

2. Leen has 15 oranges. If she divides them equally into 3 groups, how many oranges will be in each group?

   $15 \div 3 = 5$

3. If there are 40 children waiting to go on a rollercoaster and each car can hold 5 people, how many cars will need to be filled?

   $40 \div 5 = 8$

4. During a practice session, Shadi swam an average of 9 laps per session. If he attended 4 practice sessions, how many laps would he be able to cover on average?

   $9 \times 4 = 36$

Show Your Turn

1. Fill in the blanks.

= 6

3 + 3 = 6 Or 2 × 3 = 6

= 12

6 + 6 = 12 Or 2 × 6 = 12

2. Find the products.

3 x 4 = 12	3 x 9 = 27	4 x 6 = 24	5 x 8 = 40
2 x 6 = 12	1 x 8 = 8	5 x 6 = 30	4 x 9 = 36

3. Write the division sentences.

A 

6 ÷ 3 = 2

B 

15 ÷ 3 = 5

C 

12 ÷ 4 = 3

D 

4 ÷ 2 = 2

Your Work

1. Complete the answers.

3 × 7 = 21	7 + 7 + 7 = 21
4 × 2 = 8	2 + 2 + 2 + 2 = 8
4 × 6 = 24	6 + 6 + 6 + 6 = 24

2. Write 3 division sentences that have the same product.

24 ÷ 6 = 4	16 ÷ 4 = 4	20 ÷ 5 = 4

Unit 4
Measurement

Vocabulary

- length
- meter (m)
- centimeter (cm)
- time
- digital clock
- analog clock
- hour
- half past
- minute
- calendar
- months of the year
- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December
- days of the week
- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Objectives

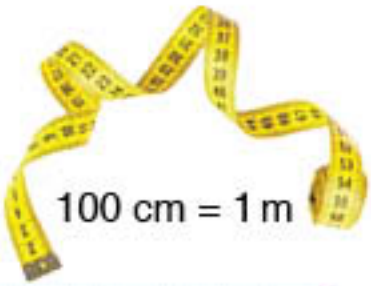
Upon completion of this unit, you will be able to:

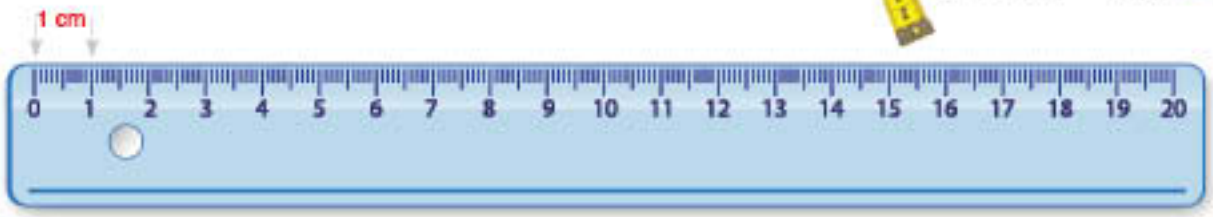
- Name the standard metric unit of length.
- Estimate and measure the length of objects in centimeters and meters.
- Differentiate between analog and digital clocks.
- Tell the time.
- Recognize the order of the days of the week and the months of the year.

(4-1) Length

Length is a measure of how long an object is, or the distance between two points. The units of measurement for length are centimeters (cm) or meters (m).

Length Measurement Units





1. Circle the appropriate length unit to measure each object.

door

(m) cm

sharpener

m (cm)

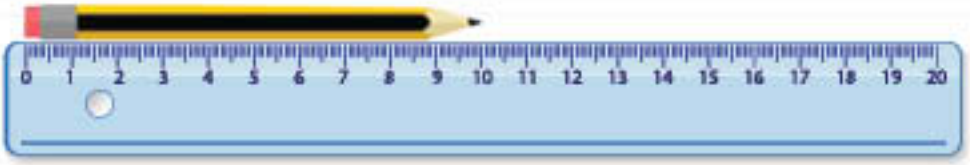
book

m (cm)

2. Measure each object to the nearest centimeter (cm).

4 cm

10 cm



3 cm

3. Estimate and circle the length in meters for each picture.

70 m 2 m

20 m 3 m

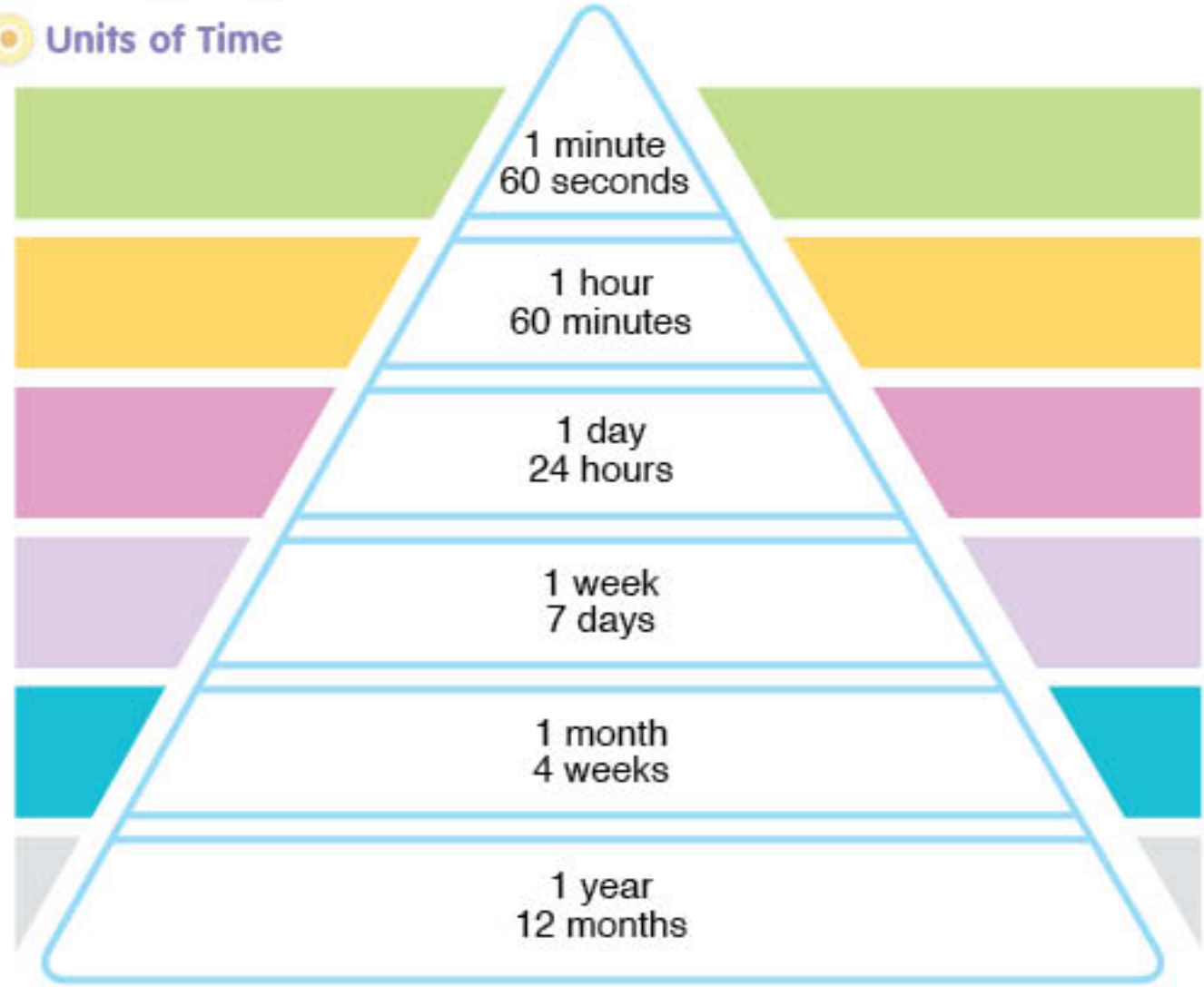
Your Work

Write the length of your:

classroom	English book
5 m	20 cm

(4-2) Time

Units of Time



1. Circle the right answers.

A	It has 12 months:	1 year	1 day
B	It has 4 weeks:	1 year	1 month
C	It has 24 hours:	1 day	1 week
D	It has 60 minutes:	1 week	1 hour

Clocks give us time in hours and minutes.

There are two types of clocks: analog and digital.

Analog clock

4 o'clock

half past 4

Digital clock

12 o'clock

half past 12

2. Circle the correct times.

8 o'clock

half past 8

9 o'clock

half past 9

10 o'clock

half past 9

3 o'clock

half past 3

3. Match.

It's half past 9.

It's 5 o'clock.

It's half past 1.

4. Write the correct times.

A

It's half past 2.

B

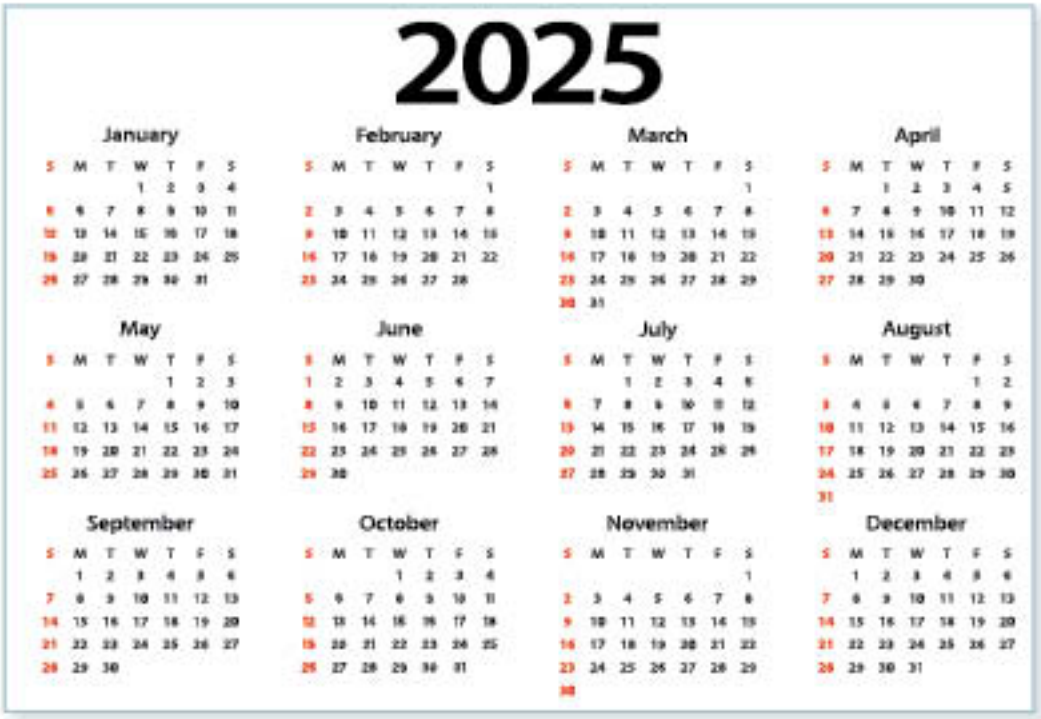
It's 11 o'clock.

C

It's 3 o'clock.

(4-3) Months of the Year

Months of the Year



We have 12 months in the year, starting in January and ending in December.

1. Write the missing months.

June

July

August

September

October

November

2. Write the missing letters.

J u ne	M a y	Apri l	M arch
Octo b er	F ebruary	Dece m ber	

3. Write the months of the year in correct order.

May	March	July
October	August	February
June	December	November
April	September	January

A	January	B	February	C	March
D	April	E	May	F	June
G	July	H	August	I	September
J	October	K	November	L	December

4. Use the calendar below to answer the following questions:

April

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

A How many days are there in the month of April? 30

B April is the _____ (seventh / fourth) month of the year.

Your Work

Students' own answers

1. Write your favorite month. _____

2. Write your birth month. _____

(4-4) Days of the Week

We have 7 days in the week.

- **Yesterday** is the day before today.
- **Tomorrow** is the day after today.

1. Write the correct days.

Yesterday	Today	Tomorrow
Tuesday	Wednesday	Thursday
Sunday	Monday	Tuesday
Wednesday	Thursday	Friday
Monday	Tuesday	Wednesday
Saturday	Sunday	Monday
Friday	Saturday	Sunday
Thursday	Frlday	Saturday

2. Look at part of Maha's work schedule and answer the questions.

Month: March	Time	Work
Sunday	6 o'clock	Wake up
Monday	7 o'clock	Go to school
Tuesday	half past 2	Back to home
Wednesday	4 o'clock	Do homework
Thursday	6 o'clock	Watch TV
	7 o'clock	Help my mother
	half past 8	Go to sleep

A The month is March .

B This schedule is for the days:

1 Sunday 2 Monday 3 Tuesday 4 Wednesday 5 Thursday

C The two days that are not on the schedule are:

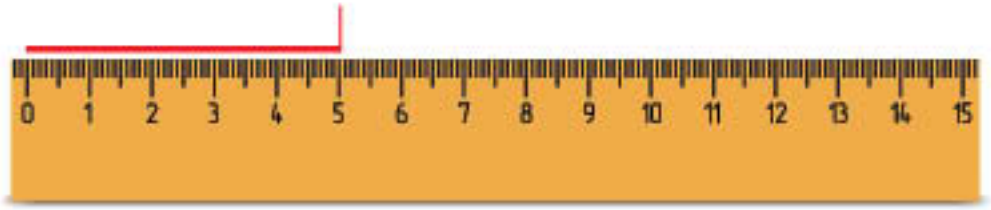
Friday , Saturday

D How much time does Maha spend watching TV?

1 hour

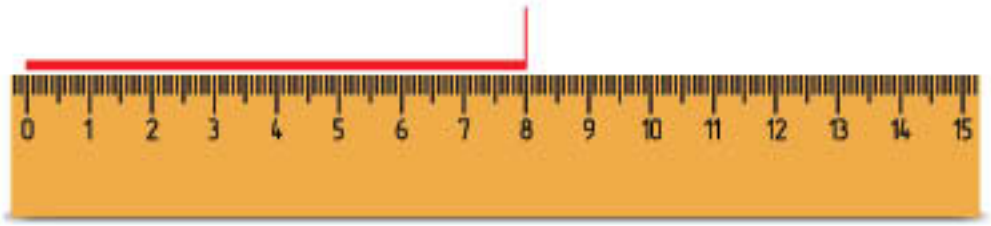
Show Your Turn

1. Write the lengths.

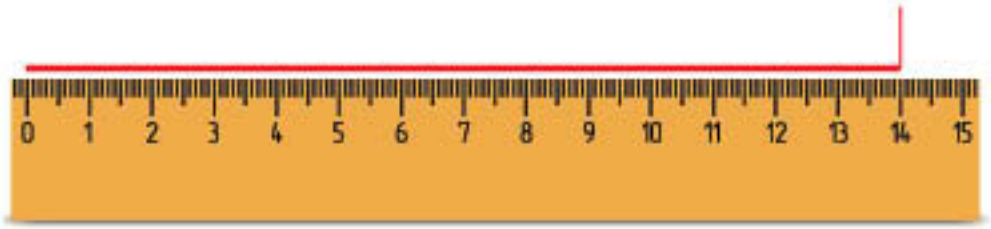


5 cm

4 cm



8 cm



14 cm

2. Circle the correct answers.

24 m | 3 m

2 m | 20 m

100 m | 5 m

3. Circle the correct answers.

A The day after Saturday is: (Sunday / Monday)

B The year has: (10 months / 12 months)

C An hour equals: (45 minutes / 60 minutes)

D January is: (The first month of the year / The last month of the year)

E October comes after: (September / November)

Your Work

Students' own answers

Draw your own clock showing the time you:

Wake up	Go to sleep

Unit 5
Geometry and Patterns

Vocabulary

- shapes
- side
- vertex (corner)
- fraction
- equal parts
- whole
- part
- half
- halves
- one third
- one fourth (quarter)
- numerator
- denominator
- pattern

Objectives

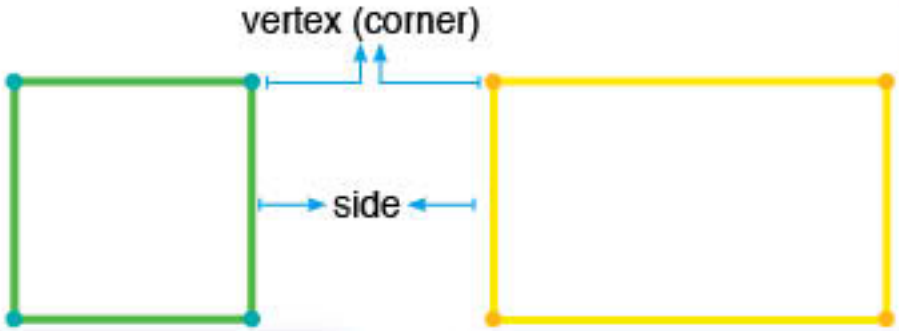
Upon completion of this unit, you will be able to:

- Find the number of sides and vertices of a two-dimensional shape.
- Define what a fraction is.
- Recognize the numerators and denominators.
- Analyze patterns.
- Recognize types of patterns.

(5-1) Shapes

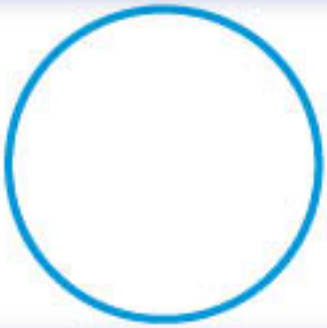
Shapes: Sides and Corners

A side is a straight line. Vertices (**corners**) are where two sides meet.

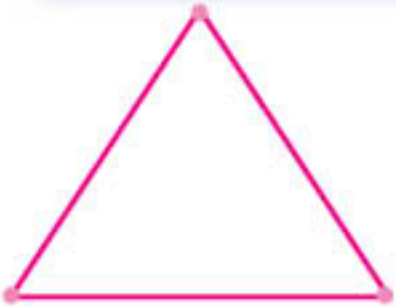


Square
4 sides, 4 vertices

Rectangle
4 sides, 4 vertices

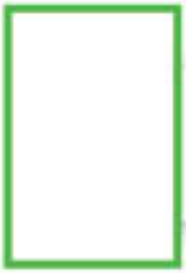


Circle
no sides, no vertices



Triangle
3 sides, 3 vertices

1. Write the number of sides and vertices (corners) for each shape.



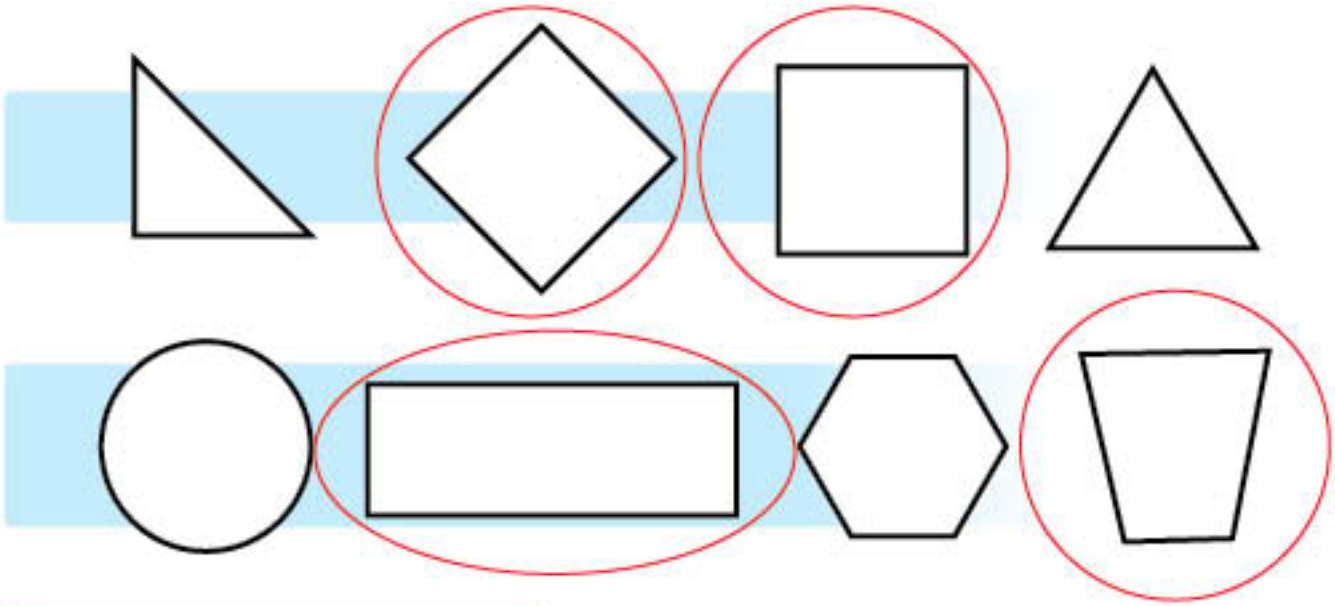
4 sides
4 vertices

3 sides
3 vertices

3 sides
3 vertices

4 sides
4 vertices

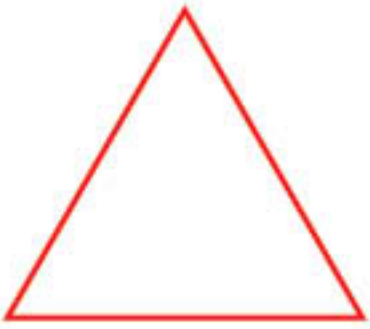
2. Circle the shapes that have four sides.



Your Work

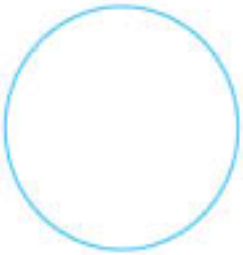
"I am a shape with 3 straight sides and 3 vertices; who am I?"
Draw to solve.

Triangle

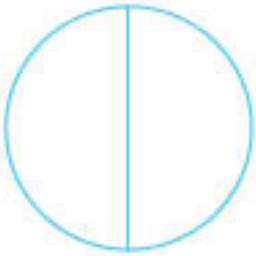


(5-2) Fractions

Halves of Shapes



1 whole

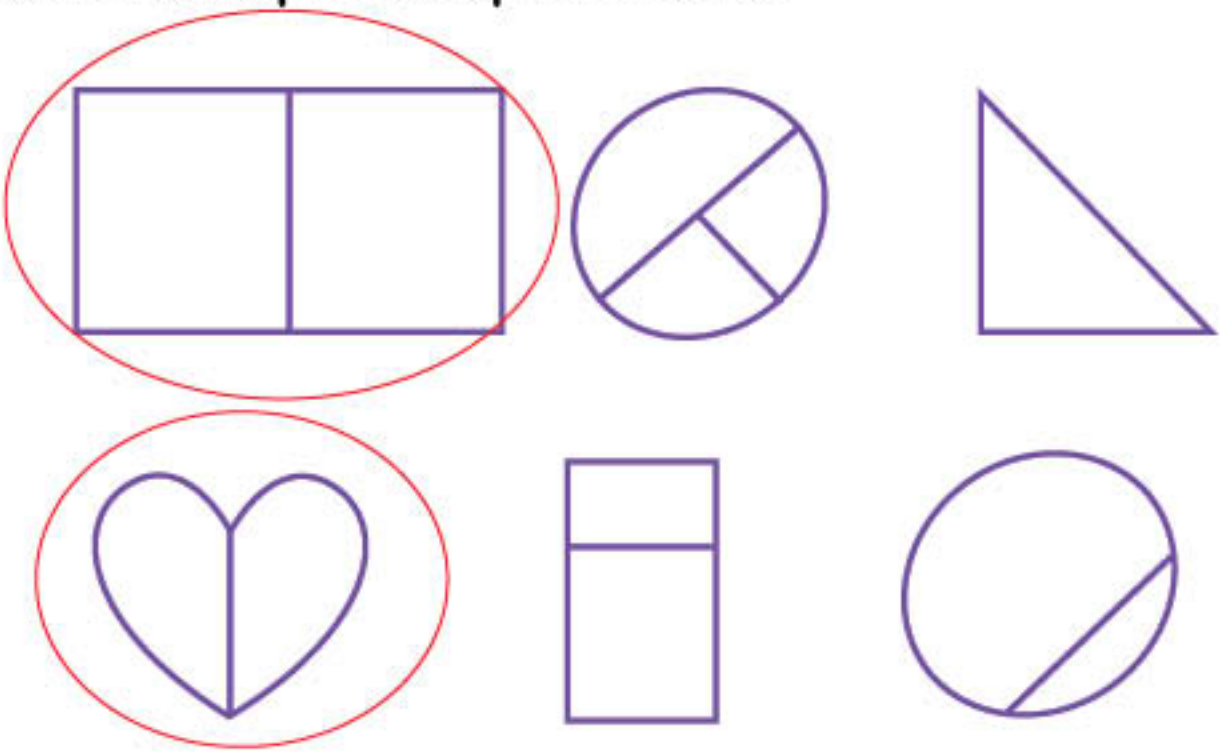


2 equal parts =
2 halves

one half of
two equal parts = $\frac{1}{2}$

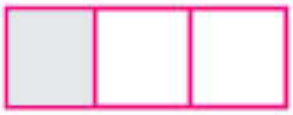
half = $\frac{1}{2}$ → numerator (parts shaded of the whole)
→ denominator (total parts of the whole)

1. Circle the shapes that represent halves.



1 whole

3 equal parts



one third of 3 equal parts

one third = $\frac{1}{3}$ → numerator (parts shaded of the whole)
→ denominator (total parts of the whole)

1 whole

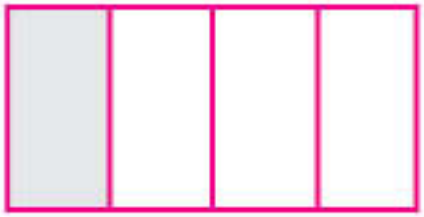
4 equal parts

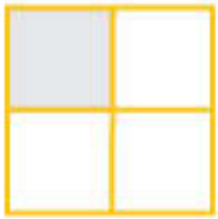
one fourth of 4 equal parts

one fourth (quarter) = $\frac{1}{4}$ → numerator (parts shaded of the whole)
→ denominator (total parts of the whole)

2. Color $\frac{1}{3}$ of each shape.

3. Color $\frac{1}{4}$ of each shape.



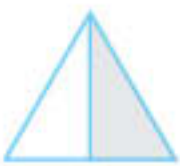


4. Complete.

Fraction	Numerator	Denominator
$\frac{1}{4}$	1	4
$\frac{1}{2}$	1	2
$\frac{1}{3}$	1	3

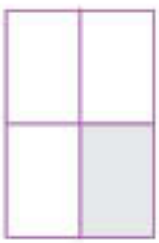
Your Work

1. Draw lines to divide the shape into halves.



Color $\frac{1}{2}$

2. Draw lines to divide the shape into fourths.



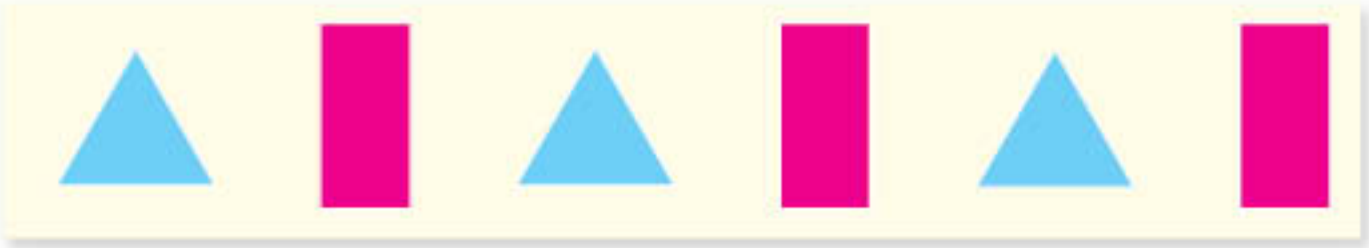
Color $\frac{1}{4}$

3. Draw lines to divide the shape into thirds.

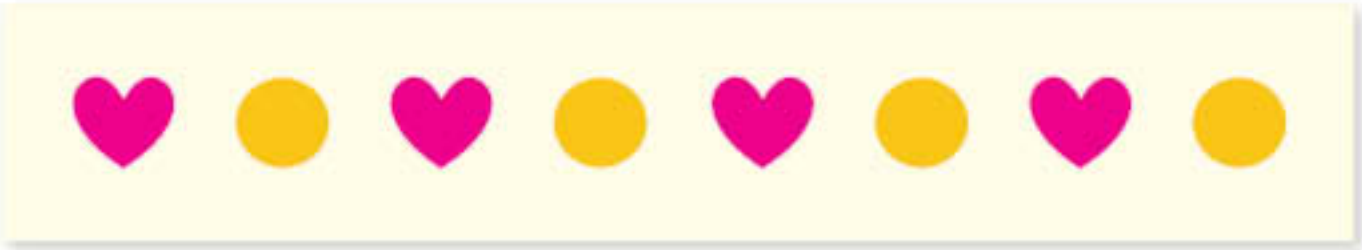
Color $\frac{1}{3}$

(5-3) Patterns

A pattern is a repeated design found in an ordered set of numbers, shapes or other mathematical obJects that are arranged according to a rule.



1. Complete the pattern.



(5-4) Problem Solving

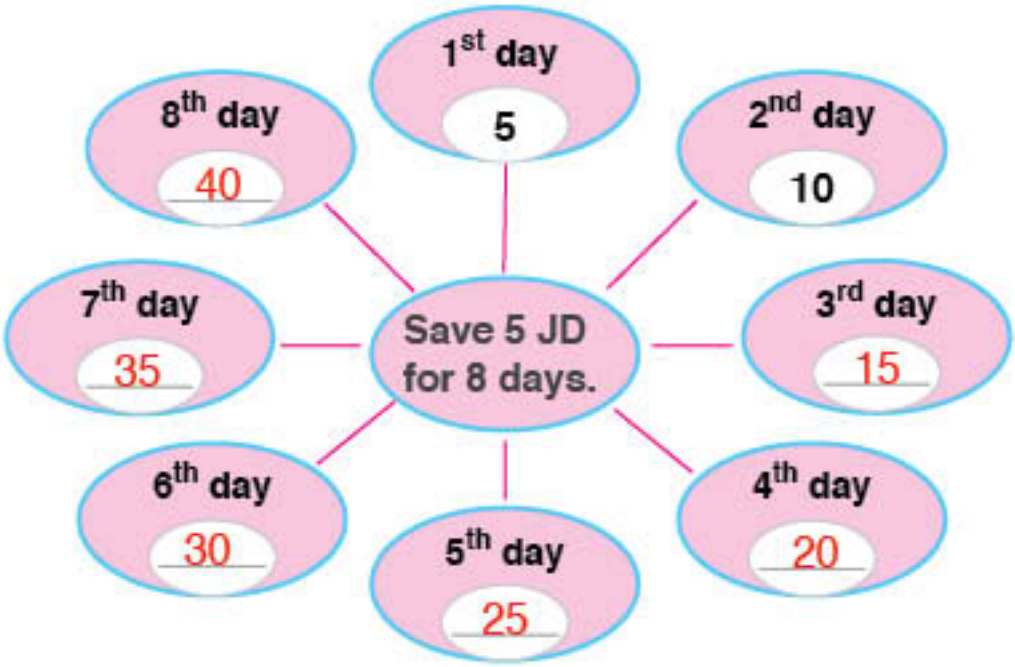
1. Amal wants to save 2 coins daily for one week.
How many coins will she save at the end of the week?

Note that if Amal adds two coins every day, she can collect 14 coins at the end of the week.

Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday
2	+2	4	+2	6	+2	8	+2	10	+2	12	+2	14

14 coins

2. Find out how many coins Tala can collect.



So, Tala can collect 40 JD at the end of 8 days.

Show Your Turn

1. Complete the number patterns.

+1	1	2	3	4	5	6	7	8	9
+2	2	4	6	8	10	12	14	16	18
+3	3	6	9	12	15	18	21	24	27
+2	1	3	5	7	9	11	13	15	17

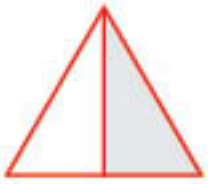
2. Write the fractions.

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{2}$

3. Draw according to the fractions below.



$\frac{1}{2}$

$\frac{1}{4}$

$\frac{1}{3}$


Spark
of
Math