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JUNIOR SCHOOL, UTTARA
CLASS: II, SUBJECT: MATHEMATICS
SESSION: 2019 – 2020
HANDOUT-01

Fraction

A **fraction** simply tells us how many parts of a whole we have. You can recognize a fraction by the slash that is written between the two numbers. We have a top number, the numerator, and a bottom number, the denominator. For example, ½ is a fraction. So ½ of a pie is half a pie.

Numerator / Denominator

We call the top number the **Numerator**, it is the number of parts we **have**.
We call the bottom number the **Denominator**, it is the number of parts the whole is **divided into**.

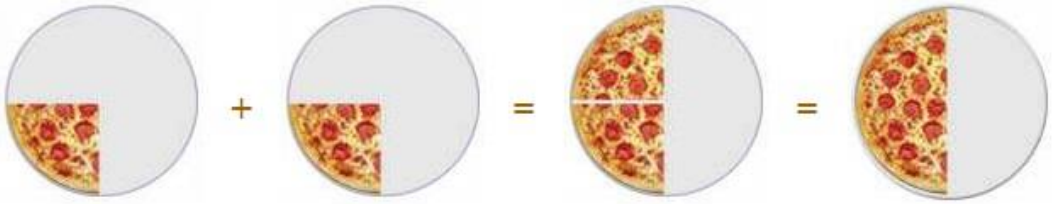
$$\frac{\text{Numerator}}{\text{Denominator}}$$

You just have to remember those names! (If you forget just think "Down"-ominator)

Adding Fractions

It is easy to add fractions with the **same denominator** (same bottom number):

$^1/_4$	+	$^1/_4$	=	$^2/_4$	=	$^1/_2$
(One-Quarter)		(One-Quarter)		(Two-Quarters)		(One-Half)



One-quarter plus one-quarter equals two-quarters, equals one-half

Subtracting Fractions

There are 3 simple steps to subtract fractions

- Step 1. Make sure the bottom numbers (the denominators) are the same
- Step 2. Subtract the top numbers (the numerators). Put the answer over the same denominator.
- Step 3. Simplify the fraction (if needed).

Example 1:

$$\frac{3}{4} - \frac{1}{4}$$

Step 1. The bottom numbers are already the same. Go straight to step 2.

Step 2. Subtract the top numbers and put the answer over the same denominator:

$$\frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4}$$

Step 3. Simplify the fraction:

$$\frac{2}{4} = \frac{1}{2}$$

Ordering fractions in ascending order

- **Ordering fractions with same denominators**
  For the fractions having the same denominator, the fraction with the smallest numerator is the smallest.

  Example: Arrange $3/7$, $2/7$, $5/7$, $1/7$ in ascending order.

Comparing the numerators, we get $1 < 2 < 3 < 5$

Therefore, $1/7 < 2/7 < 3/7 < 5/7$

Ordering fractions in ascending order

For fractions having like, same or equal denominators, compare the numerators directly to arrange the fractions in descending order. The fraction with greatest numerator is the bigger fraction of the group. Similarly, the fraction with smallest numerator is the smaller fraction of the group.

Example: Arrange 6/8, 3/8, 2/8, 7/8 in descending order.

Comparing the numerators, we get 7 > 6 > 3 > 2

Therefore, 7/8 > 6/8 > 3/8 > 2/8

Comparison of fractions

The fractions are made up of two parts, called the numerator and the denominator. To compare fractions with the same denominator, simply look at the numerator to determine which symbol to use (<, >, =).

Examples:

1) $\frac{2}{5} < \frac{3}{5}$ 2) $\frac{5}{9} > \frac{1}{9}$ 3) $\frac{4}{10} = \frac{4}{10}$

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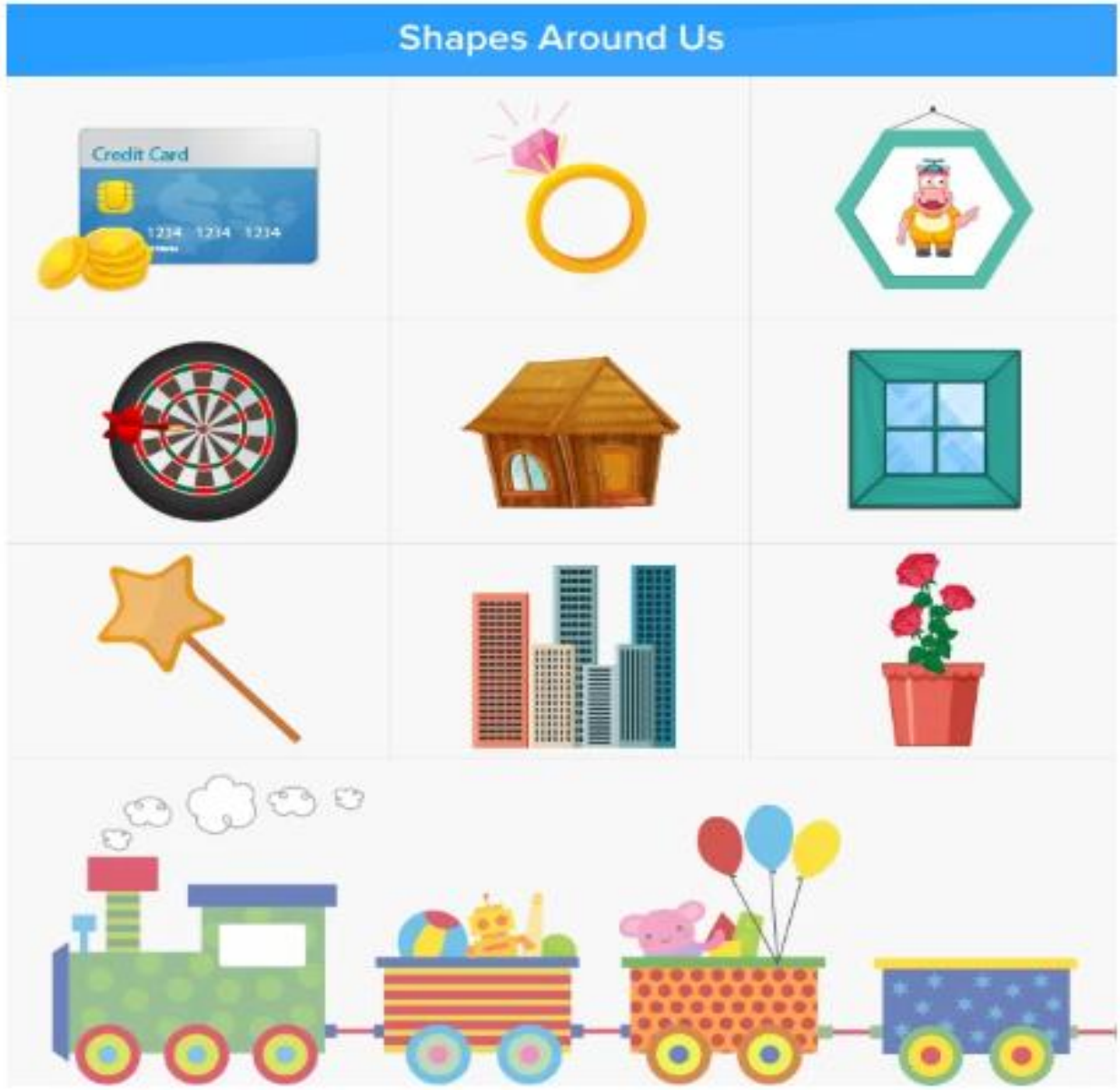
What are Shapes?

In geometry, a shape can be defined as the form of an object or its outline, outer boundary or outer surface. Everything we see in the world around us has a shape. We can find different basic shapes such as the **two-dimensional** square, rectangle, and oval or the **three-dimensional** rectangular prism, cylinder, and sphere in the objects we see around us. These geometric shapes appear in objects we see as credit cards, bills and coins, finger rings, photo frames, dart boards, huts, windows, magician's wands, tall buildings, flower pots, toy trains, and balloons.

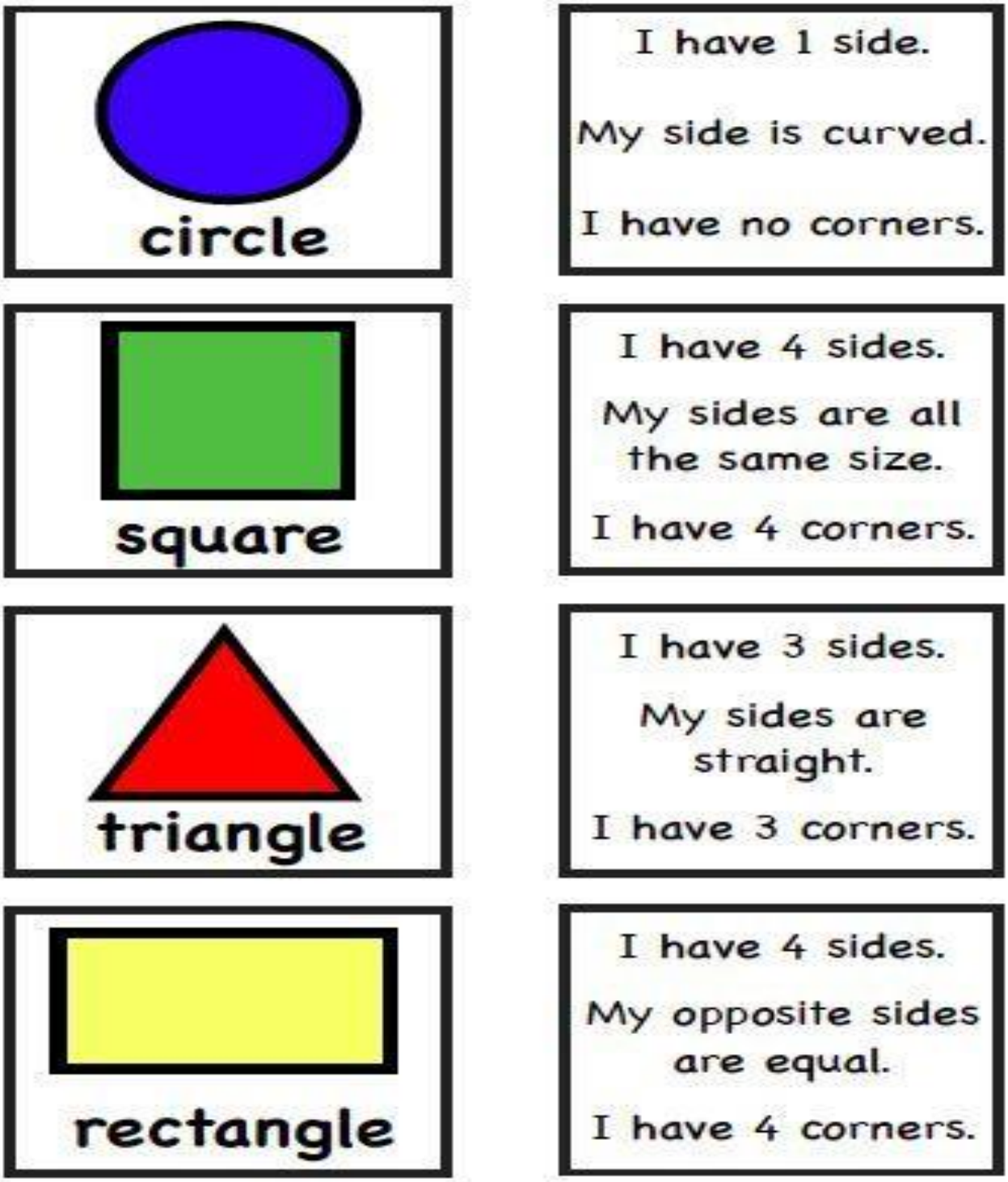


Different Types of Shapes

What is a two-dimensional shape?

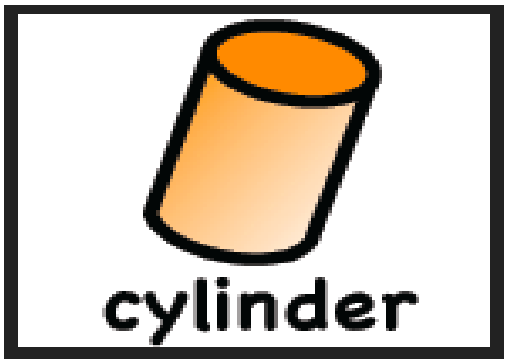
In geometry, a two-dimensional shape can be defined as a flat plane figure or a shape that has two dimensions – **length** and **width**.

Examples:



What are Three-Dimensional shapes?

In geometry, a three-dimensional shape can be defined as a solid figure or an object or shape that has three dimensions – length, width and height.

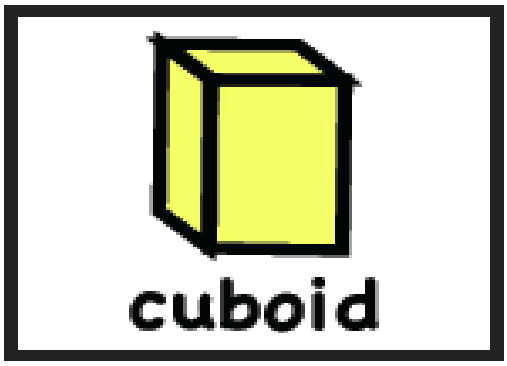


I have 2 circle faces .

I have 1 curved face.

I have no corners.

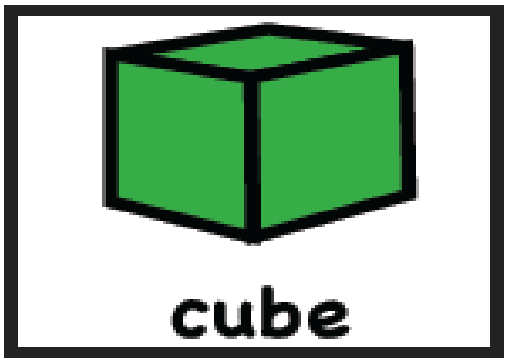
I have 2 curved edges.



I have 6 faces.

I have 6 corners.

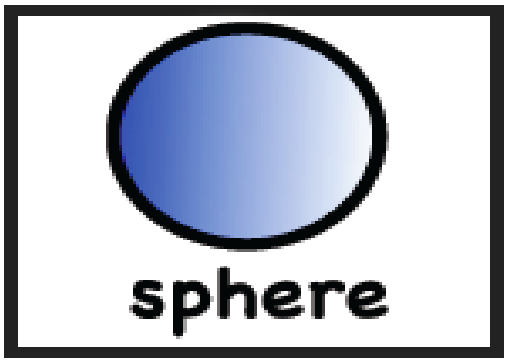
I have 12 straight edges.



I have 6 faces that are all squares.

I have 6 corners.

I have 12 straight edges.



I have 1 curved face.

I have 0 corners.

I am easy to roll.

Properties & Example of Solid Figures:

Figure	Properties	Examples
Rectangular solid (Cuboid)	Rectangular faces Faces: 6 Edges: 12 Corners: 8	Cereal box, Jewelry box
Cube	All faces are square Faces: 6 Edges: 12 Corners: 8	Dice, Rubik's cube
Cylinder	Circular cross-section. Two circular bases.	Coke can, Glass, Tumbler, Pipe, Measuring Jar
Cone	Circular base The point of cone is vertically above the center of circular base	Birthday cap, Ice-cream cone, Traffic safety cone
Sphere	Each point on sphere is at equal distance from the center	Soccer ball, tennis ball, earth

N.B. Please check the link below:
https://www.khanacademy.org/math/cc-2nd-grade-math/cc-2nd-measurement-data#cc-2nd-shapes

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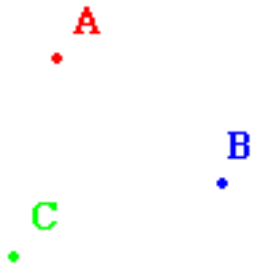
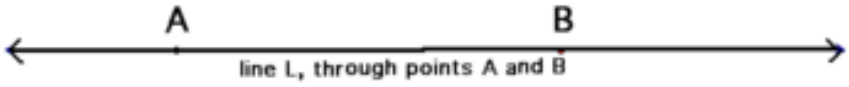
Points and Line Segments:

A point is a specific location in space. A point is drawn as a dot. Often we label a point with some letter. We would say "Point A" for instance.

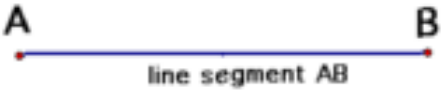
Example: Below you see three points labeled A, B and C.



Line consists of a set of points. It has a beginning and an end.



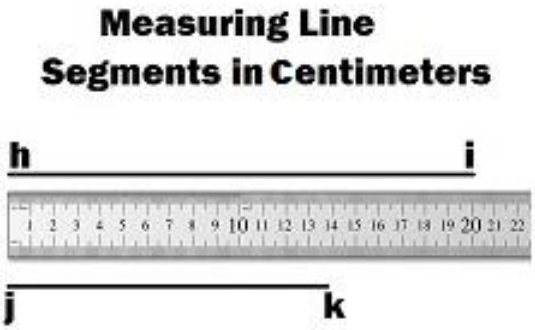
A line segment is just a small part of a line. It starts at one point and ends at another.



Measuring Line Segments:

A line segment is just part of a line. If you want to measure the length of a line segment, put the endpoint of the segment on the zero mark of the ruler. Then see where it ends.

Example:



N.B. Please check the link below:
https://www.khanacademy.org/math/cc-2nd-grade-math/cc-2nd-measurement-data#cc-2nd-measuring-length

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HANDOUT- 04

Money:

Money can be defined as anything that people use to buy goods and services. It is also used to measure and store value. Money usually takes the form of coins and banknotes. There are a number of different currencies used in countries around the world. Many countries have their own currency, while some use a shared currency.

We use the symbol **Re** for a rupee and **Rs** for more than one rupee. 'p' is used to denote paise. The rupee and the paise are separated by a dot (.).

Conversion of rupees into paise:

We know that 1 rupee = 100 paise. To convert rupees in to paise , we multiply the amount in rupees by 100.

Example:

5 rupees = 5 x 100 paise = 500 paise
10 rupees = 10 x 100 paise = 1000 paise

To convert 'rupees and paise' in to 'paise', multiply the amount in rupees by 100 and add the number of paise to it..

Example:

12 rupees 50 paise = 12 x 100 paise + 50 paise
= 1200 paise + 50 paise
= 1250 paise

6 rupees 8 paise = 6 x 100 paise + 8 paise
= 600 paise + 8 paise
= 608 paise

Conversion of paise into rupees:

To convert paise into rupees, simply put a dot (.)before the second digit from the right.

Example:

2078 paise = Rs 20.78
109 paise = Rs 1.09
1800 paise = Rs 18.00

Remember!

The numeral to the left of the dot shows the amount in rupees. The numeral to the right of the dot shows the number of paise.

N.B. Please check the link below:
https://www.khanacademy.org/math/cc-2nd-grade-math/cc-2nd-measurement-data#cc-2nd-money

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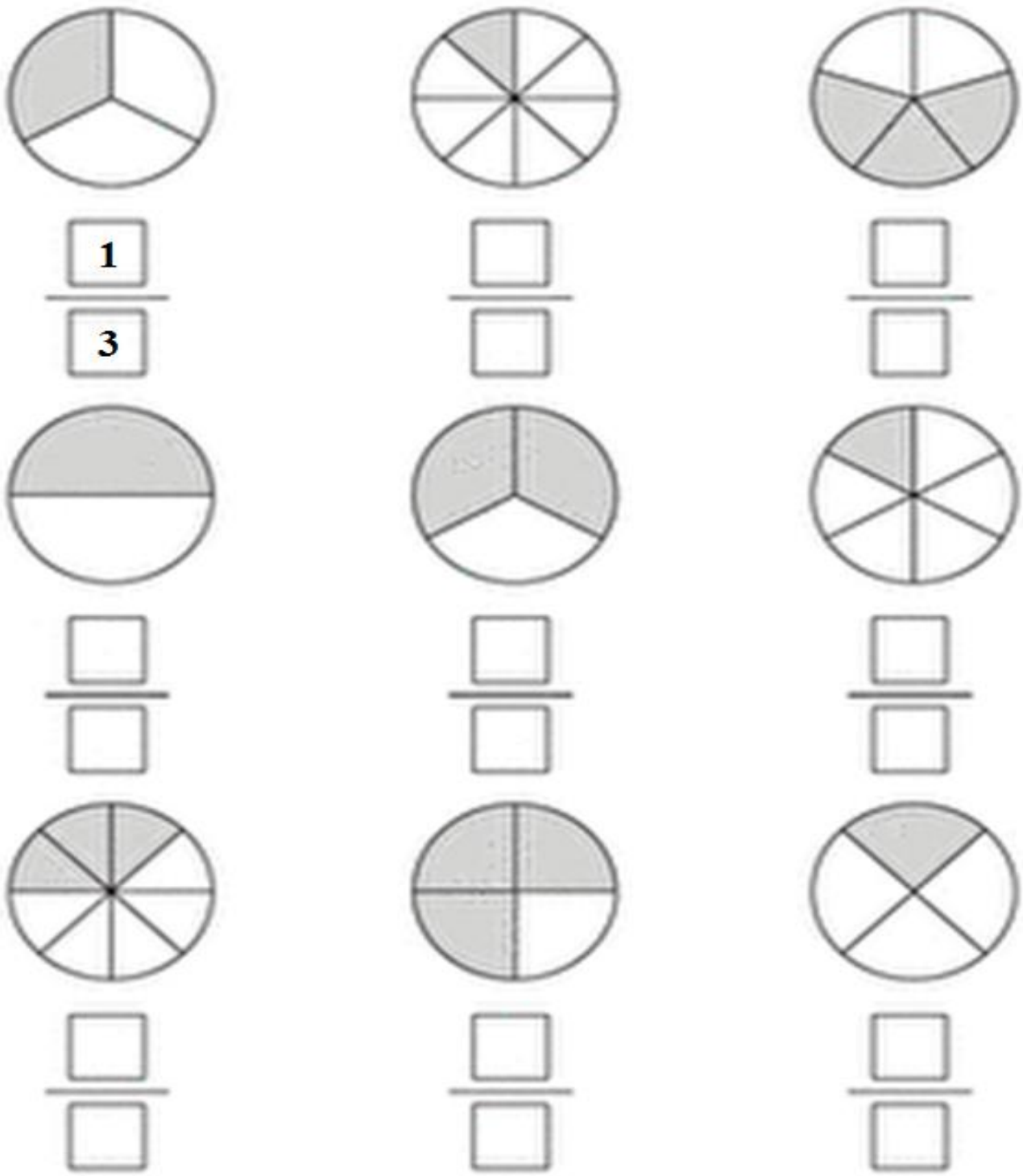
NAME: **CLASS:**

Write what fraction of the whole is shaded:



N.B.: Do page 82 in NNW Book.

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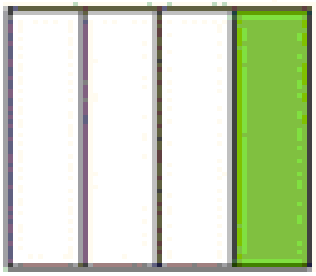
WORKSHEET NO: 2

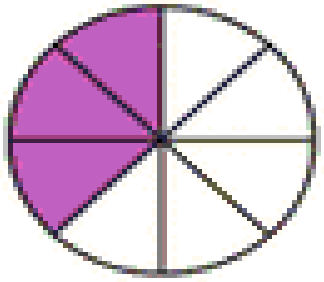
NAME: **CLASS:**

A **fraction** is part of a whole.
The top number represents the part.
The bottom number represents the whole.

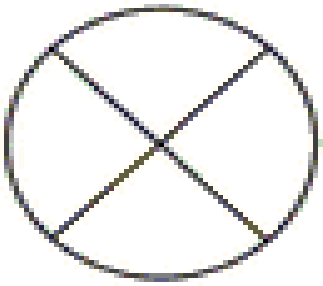
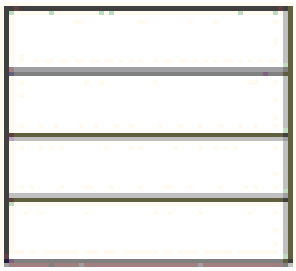
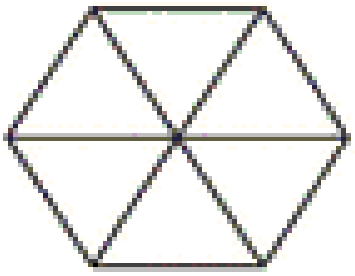
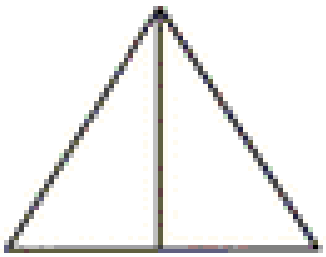
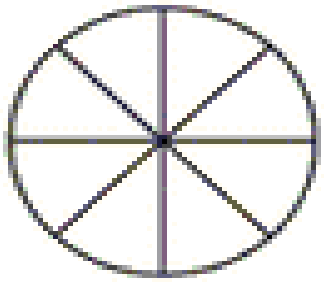
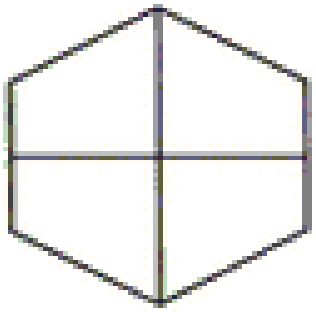
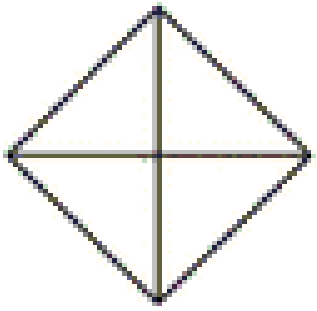
$\frac{1}{4}$



$\frac{3}{8}$



Color the parts of the shape that represent each fraction.

$\frac{1}{4}$ 	$\frac{3}{4}$ 	$\frac{5}{6}$ 
$\frac{2}{6}$	$\frac{1}{2}$ 	$\frac{5}{8}$ 
$\frac{1}{4}$ 	$\frac{2}{5}$	$\frac{2}{4}$ 

N.B.: Do page 83 in NNW Book.

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WORKSHEET NO: 3

NAME: **CLASS:**

Q.A. Write in the ascending order:

Fraction	Ascending Order
1) $\frac{4}{10}$ $\frac{7}{10}$ $\frac{1}{10}$ $\frac{3}{10}$	
2) $\frac{1}{8}$ $\frac{7}{8}$ $\frac{4}{8}$ $\frac{5}{8}$	
3) $\frac{2}{9}$ $\frac{3}{9}$ $\frac{8}{9}$ $\frac{5}{9}$	
4) $\frac{3}{8}$ $\frac{1}{8}$ $\frac{7}{8}$ $\frac{2}{8}$	
5) $\frac{4}{7}$ $\frac{3}{7}$ $\frac{1}{7}$ $\frac{5}{7}$	
6) $\frac{3}{5}$ $\frac{1}{5}$ $\frac{2}{5}$ $\frac{4}{5}$	
7) $\frac{5}{6}$ $\frac{3}{6}$ $\frac{1}{6}$ $\frac{2}{6}$	
8) $\frac{1}{8}$ $\frac{6}{8}$ $\frac{2}{8}$ $\frac{3}{8}$	
9) $\frac{6}{9}$ $\frac{8}{9}$ $\frac{7}{9}$ $\frac{4}{9}$	
10) $\frac{3}{8}$ $\frac{1}{8}$ $\frac{5}{8}$ $\frac{6}{8}$	

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WORKSHEET NO: 4

NAME: **CLASS:**

Q.A. Write in the descending order:

Fraction	Descending Order
1) $\frac{3}{8}$ $\frac{1}{8}$ $\frac{5}{8}$ $\frac{6}{8}$	
2) $\frac{6}{9}$ $\frac{8}{9}$ $\frac{7}{9}$ $\frac{4}{9}$	
3) $\frac{1}{8}$ $\frac{6}{8}$ $\frac{2}{8}$ $\frac{3}{8}$	
4) $\frac{3}{5}$ $\frac{1}{5}$ $\frac{2}{5}$ $\frac{4}{5}$	
5) $\frac{5}{6}$ $\frac{3}{6}$ $\frac{1}{6}$ $\frac{2}{6}$	
6) $\frac{4}{7}$ $\frac{3}{7}$ $\frac{1}{7}$ $\frac{5}{7}$	
7) $\frac{3}{8}$ $\frac{1}{8}$ $\frac{7}{8}$ $\frac{2}{8}$	
8) $\frac{2}{9}$ $\frac{3}{9}$ $\frac{8}{9}$ $\frac{5}{9}$	
9) $\frac{1}{8}$ $\frac{7}{8}$ $\frac{4}{8}$ $\frac{5}{8}$	
10) $\frac{4}{10}$ $\frac{7}{10}$ $\frac{1}{10}$ $\frac{3}{10}$	

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WORKSHEET NO: 5

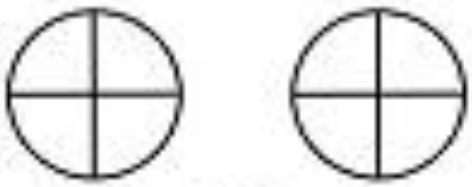
NAME: **CLASS:**

Shade the correct fraction of each shape. Then Compare each pair of fractions using the symbols (< , > , and =).

a.

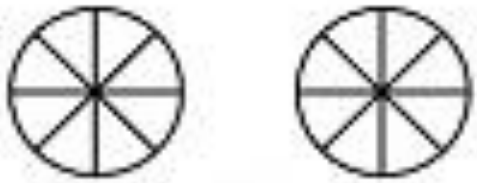
$\frac{4}{6}$ ◯ $\frac{5}{6}$

b.



$\frac{3}{4}$ ◯ $\frac{1}{4}$

c.



$\frac{5}{8}$ ◯ $\frac{5}{8}$

d.

$\frac{2}{3}$ ◯ $\frac{1}{3}$

e.

$\frac{2}{5}$ ◯ $\frac{3}{5}$

f.

$\frac{1}{7}$ ◯ $\frac{6}{7}$

g.

$\frac{2}{2}$ ◯ $\frac{1}{2}$

h.

$\frac{7}{10}$ ◯ $\frac{5}{10}$

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NAME: **CLASS:**

Q.A. Add the fractions:

1) $\frac{4}{6} + \frac{1}{6} =$ ☐

2) $\frac{2}{9} + \frac{3}{9} =$ ☐

3) $\frac{4}{8} + \frac{7}{8} =$ ☐

4) $\frac{10}{12} + \frac{6}{12} =$ ☐

5) $\frac{9}{10} + \frac{5}{10} =$ ☐

6) $\frac{1}{4} + \frac{2}{4} =$ ☐

7) $\frac{2}{5} + \frac{4}{5} =$ ☐

8) $\frac{6}{7} + \frac{3}{7} =$ ☐

9) $\frac{8}{11} + \frac{9}{11} =$ ☐

10) $\frac{1}{2} + \frac{1}{2} =$ ☐

11) $\frac{3}{7} + \frac{5}{7} =$ ☐

12) $\frac{9}{10} + \frac{8}{10} =$ ☐

13) $\frac{1}{3} + \frac{1}{3} =$ ☐

14) $\frac{5}{8} + \frac{4}{8} =$ ☐

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NAME: **CLASS:**

Q.A. Subtract the fractions:

1) $\frac{10}{12} - \frac{3}{12} =$ ☐

2) $\frac{5}{7} - \frac{3}{7} =$ ☐

3) $\frac{2}{3} - \frac{1}{3} =$ ☐

4) $\frac{3}{4} - \frac{2}{4} =$ ☐

5) $\frac{4}{5} - \frac{2}{5} =$ ☐

6) $\frac{9}{10} - \frac{3}{10} =$ ☐

7) $\frac{7}{8} - \frac{4}{8} =$ ☐

8) $\frac{5}{6} - \frac{4}{6} =$ ☐

9) $\frac{8}{10} - \frac{1}{10} =$ ☐

10) $\frac{11}{12} - \frac{10}{12} =$ ☐

11) $\frac{6}{7} - \frac{2}{7} =$ ☐

12) $\frac{10}{11} - \frac{4}{11} =$ ☐

13) $\frac{7}{9} - \frac{4}{9} =$ ☐

14) $\frac{3}{5} - \frac{2}{5} =$ ☐

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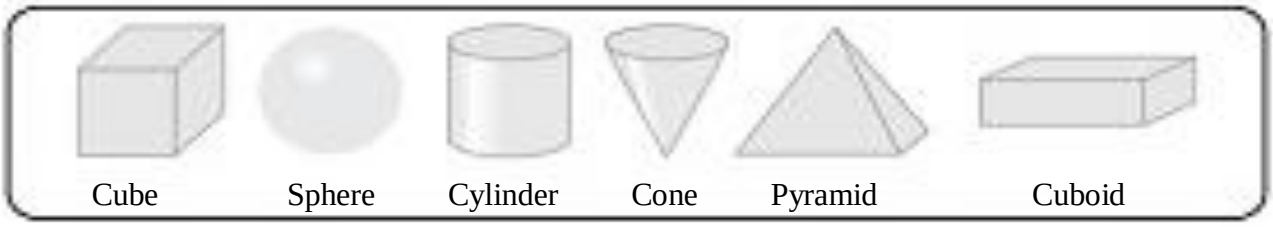
WORKSHEET NO: 8

NAME: **CLASS:**

Q.A. Write the name of the solid figure that each object looks like:



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N.B. Please check the link below:
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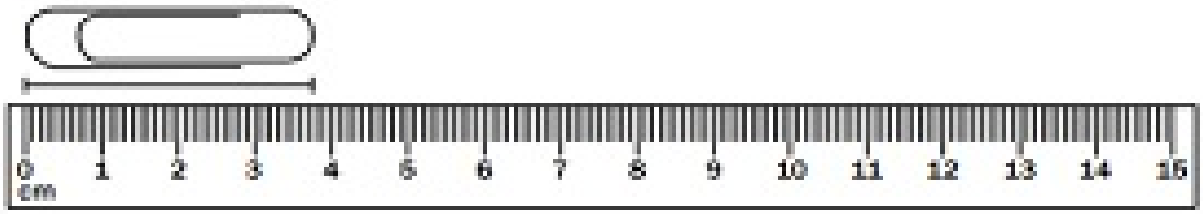
WORKSHEET NO: 9

NAME: **CLASS:**

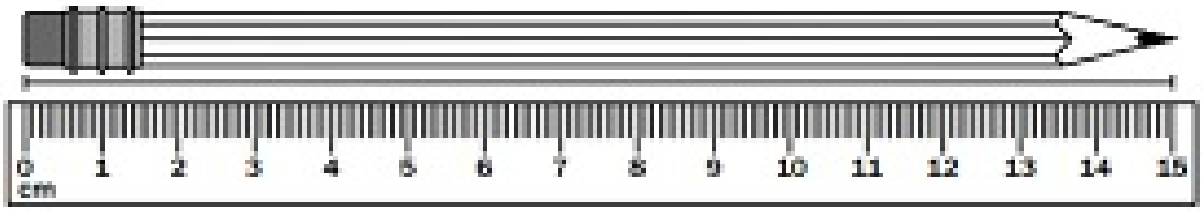
Q.A.: Measure each object with the ruler shown round to the nearest centimeter.

a)



_____

b)



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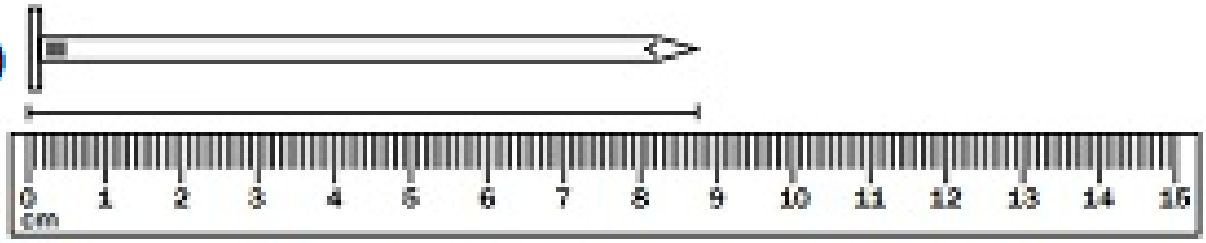
c)



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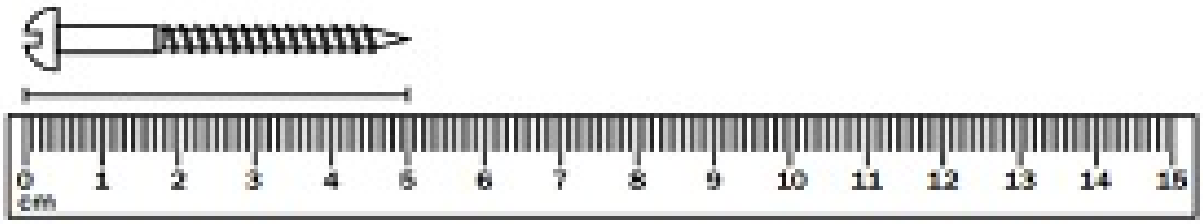
d)



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N.B. Please check the link below:
https://www.khanacademy.org/math/cc-2nd-grade-math/cc-2nd-measurement-data#cc-2nd-measuring-length

BANGLADESH INTERNATIONL TUTORIAL LIMITED
JUNIOR SCHOOL, UTTARA
CLASS: II, SUBJECT: MATHEMATICS
SESSION: 20__ - 20__
WORKSHEET NO: 10

NAME: **CLASS:**

Q.A. Add the following:

1) Rs. 803.47
+ Rs. 254.64

Ans.

2) Rs. 823.97
+ Rs. 564.25

Ans.

3) Rs. 66.87
+ Rs. 94.37

Ans.

4) Rs. 62.59
+ Rs. 179.70

Ans.

5) Rs. 987.70
+ Rs. 59.80

Ans.

6) Rs. 79.85
+ Rs. 57.64

Ans.

7) Rs. 832.79
+ Rs. 456.35

Ans.

8) Rs. 349.70
+ Rs. 578.80

Ans.

9) Rs. 75.20
+ Rs. 89.90

Ans.

10) Rs. 903.74
Rs. 9.46
+ Rs. 452.86

Ans.

11) Rs. 419.29
Rs. 9.17
+ Rs. 532.78

Ans.

12) Rs. 356.79
Rs. 56.92
+ Rs. 572.54

Ans.

Q.B. Subtract the following:

1) Rs. 607.81
- Rs. 89.63

Ans.

2) Rs. 103.43
- Rs. 88.88

Ans.

3) Rs. 927.50
- Rs. 810.78

Ans.

4) Rs. 100.64
- Rs. 17.98

Ans.

5) Rs. 200.79
- Rs. 24.94

Ans.

6) Rs. 300.28
- Rs. 156.69

Ans.

7) Rs. 500.00
- Rs. 325.80

Ans.

8) Rs. 510.60
- Rs. 320.70

Ans.

9) Rs. 100.34
- Rs. 78.78

Ans.

10) Rs. 279.50
- Rs. 180.87

Ans.

11) Rs. 70.48
- Rs. 56.79

Ans.

12) Rs. 706.18
- Rs. 98.36

Ans.

N.B. Please check the link below:
https://www.khanacademy.org/math/cc-2nd-grade-math/cc-2nd-measurement-data#cc-2nd-money