

# MATHEMATICS WORKBOOK

# KG

For the preparation of National  
& International Olympiads



- Chapter-wise practice exercises
- Previous year paper

## CREST Mathematics Olympiad (CMO)

# Mathematics Olympiad

Exams Preparation Book

**Grade KG**



#CRESTInnovator

**[www.crestolympiads.com](http://www.crestolympiads.com)**



#CRESTInnovator

## CREST Mathematics Olympiad Workbook for Grade KG

Fifth Edition

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**Disclaimer:** The information in the Workbook is to give you the path to success but it does not guarantee 100% success as the strategy is completely dependent on its execution. And it is based on previous year papers of CMO exam.

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# Preface

We are pleased to launch a thoroughly revised edition of this workbook. We welcome feedback from students, teachers, educators and parents. For improvements in the next edition, please send your suggestions at [info@crestolympiads.com](mailto:info@crestolympiads.com). Our team will make an effort to work on those suggestions.

CREST Olympiads is one of the largest Olympiad Exams with students from more than 60 countries. The objective of these exams is to build a competitive spirit while evaluating students on conceptual understanding of the concepts.

We strive to provide a superior learning experience, and this workbook is designed to complement the school studies and prepare the students for various competitive exams including the CREST Olympiads. This workbook provides a crisp summary of the topics followed by the practice questions. These questions encourage the students to think analytically, to be creative and to come up with solutions of their own. There is a previous year's paper given at the end of this workbook for the students to attempt after completing the syllabus. This paper should be attempted in 45 minutes to get an assessment of the student's preparation for the final exam.

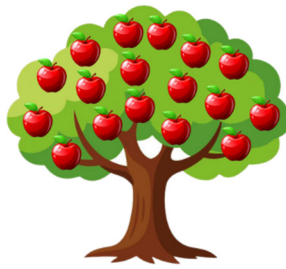
*Publishers*

# Chapter 1

## Basic Concepts on Comparison

### Basic Concepts on Comparison

**more**



**less**



**more**



**less**



When we use the word more, it means the number of objects is bigger or greater. When we use the word less, it means the number of objects is smaller or fewer.

Count the lady bugs and tick the leaf which has more ladybugs:

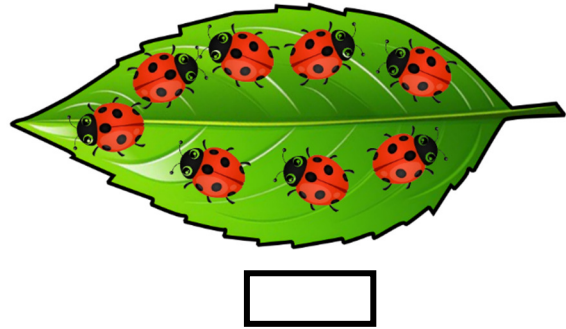
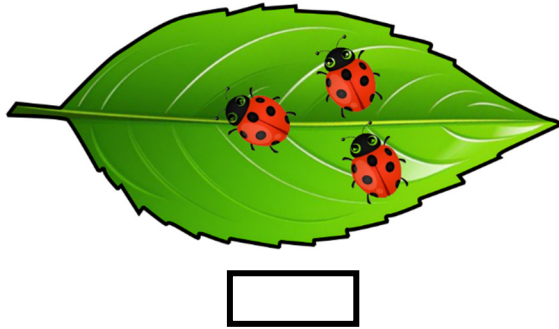
☐☐

Count the lady bugs and tick the leaf which has fewer lady bugs?

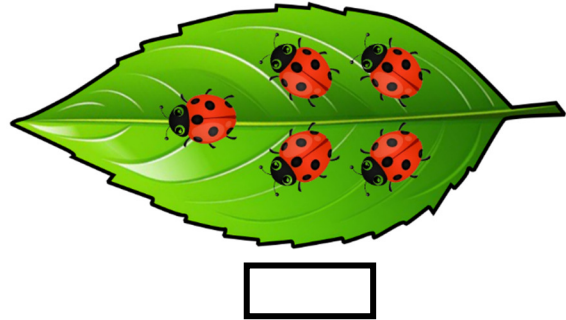
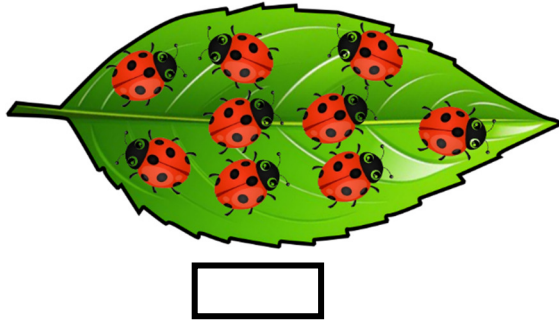
☐☐

## Basic Concepts on Comparison

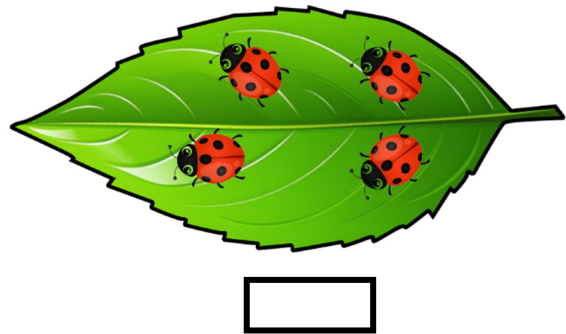
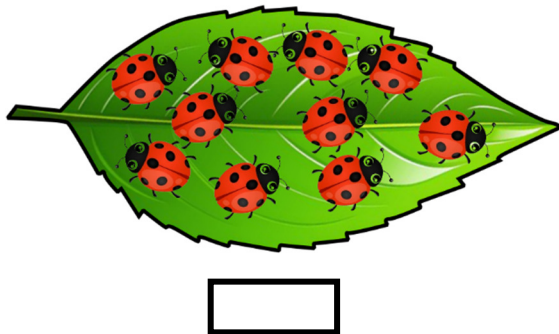
Count the lady bugs and tick the leaf which has more ladybugs?



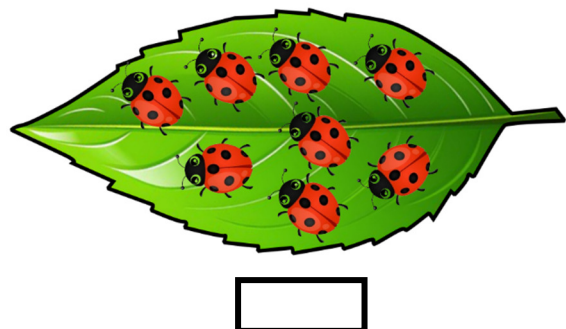
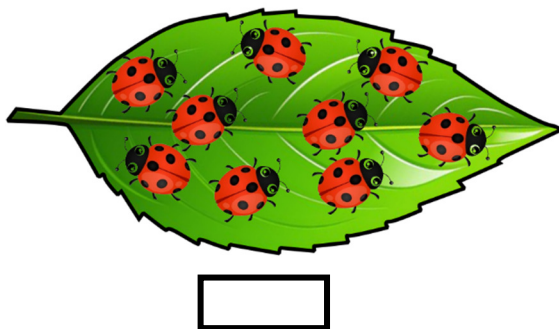
Count the lady bugs and tick the leaf which has fewer lady bugs?



Count the lady bugs and tick the leaf which has fewer lady bugs?


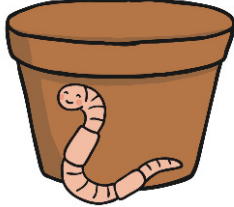




Count the lady bugs and tick the leaf which has fewer lady bugs?




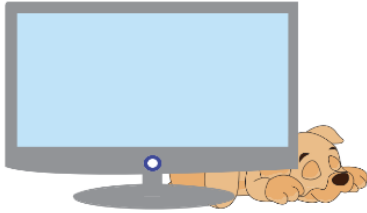


## In Front and Behind

### In Front

<p>The car is <b>in front</b> of the house.</p> 	<p>The worm is <b>in front</b> of the pot.</p> 
<p>The mouse is <b>in front</b> of the pumpkin.</p> 	<p>The dog is <b>in front</b> of the grass.</p> 

### Behind

<p>The worm is <b>behind</b> the pot.</p> 	<p>The dog is <b>behind</b> the bush.</p> 
<p>The mouse is <b>behind</b> the present.</p> 	<p>The dog is <b>behind</b> the TV.</p> 



## Activity

Choose the correct answer:

1. The cow is **in front of** / **behind** the fence.



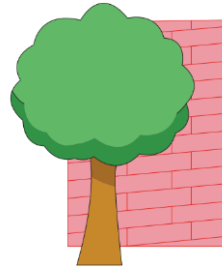
2. The goat is **in front of** / **behind** the bushes.



3. The mouse is **in front of** / **behind** the tree.



4. The tree is **in front of** / **behind** the wall.



5. The bottle is **in front of** / **behind** the bag.



## Front and Back

Front



Back



Front



Back



Front

Back

Front



Back






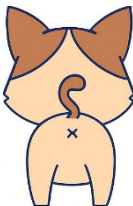
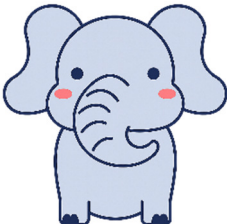
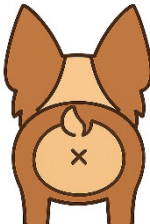

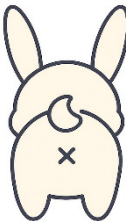


Front

Back

## Activity

Match the fronts of the animals with their backs:







## Empty and Full

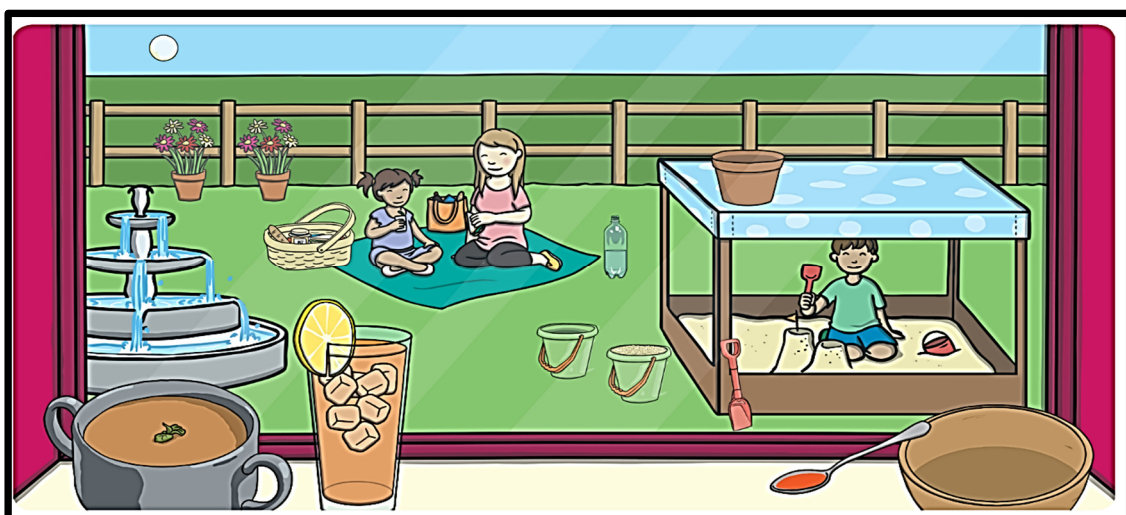
When a container does not contain anything it is called empty. A container holding as much as possible and has no more space to hold any more is said to be full.



## Activity

Look at the picture given below and draw circles around the following objects:

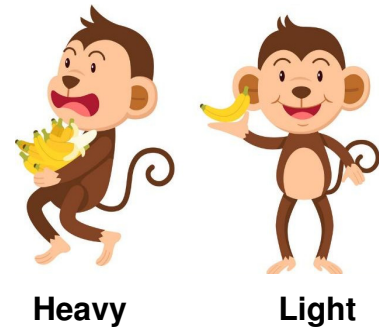
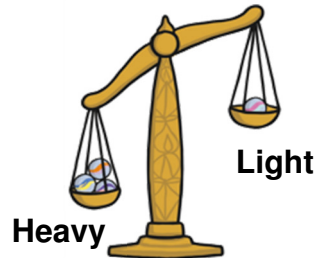
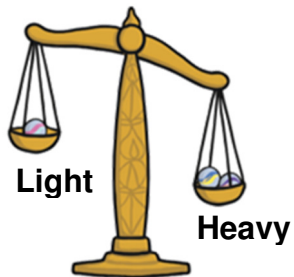
Full glass		Empty flower pot	
Empty bowl		Full moon	
Full spoon		Empty spade	

















## Heavy and Light

When we compare the weight of two objects, the one with more weight is said to be heavy and the one with less weight is said to be light.



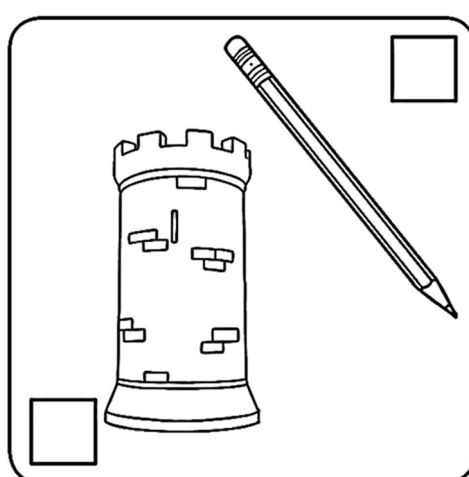
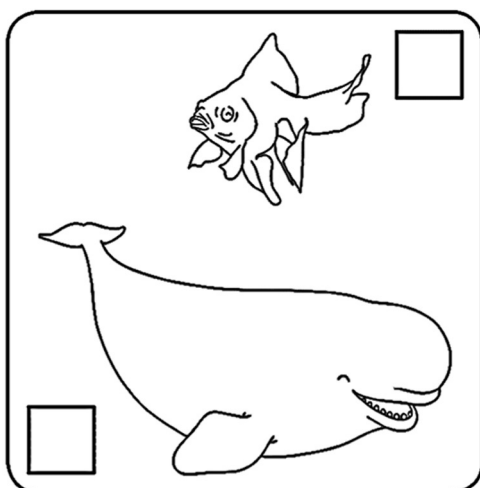
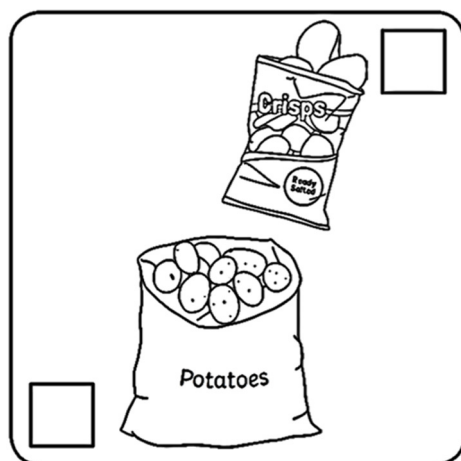
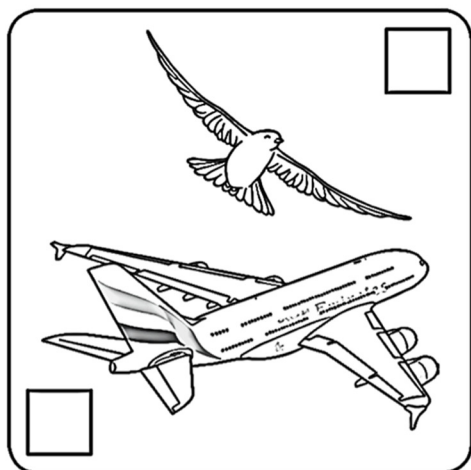
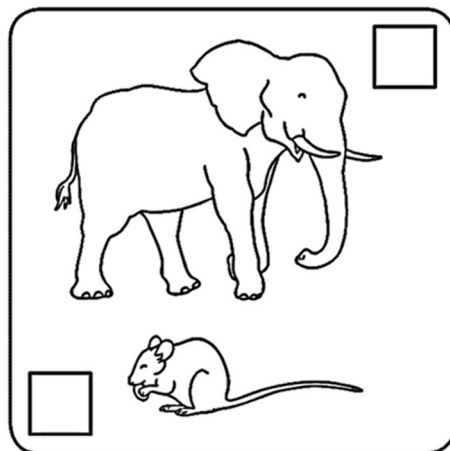
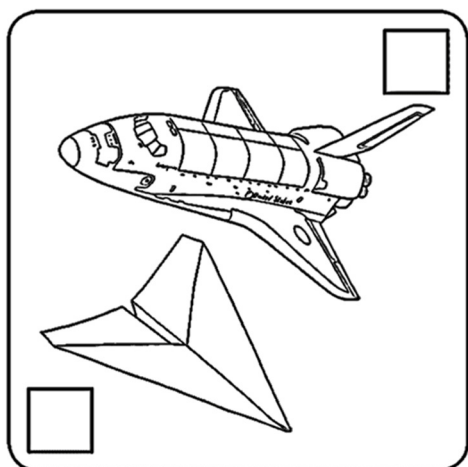
## Activity

Select the heavier object:

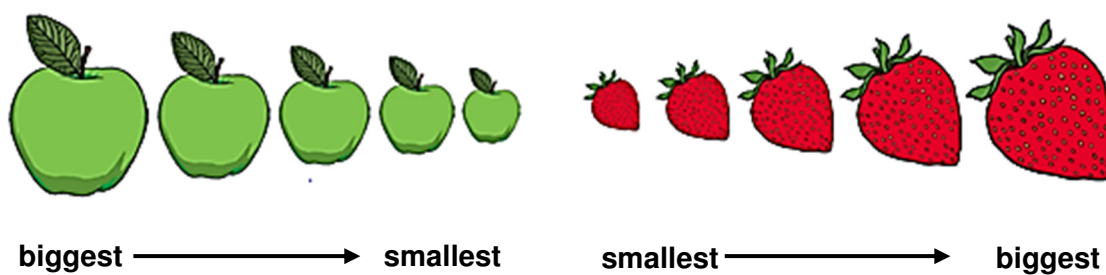
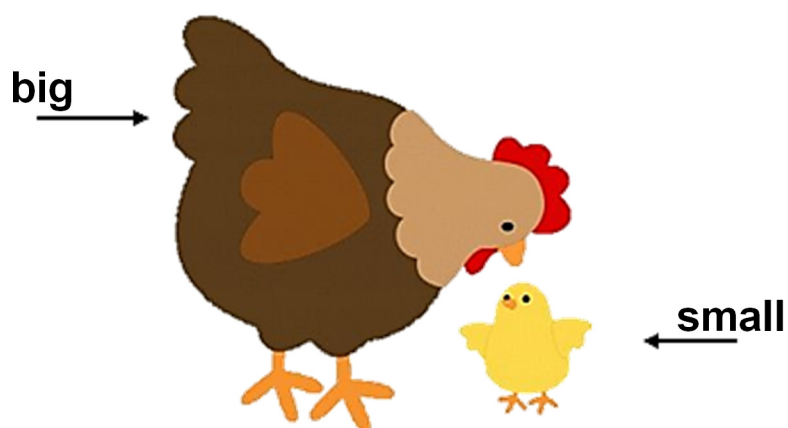
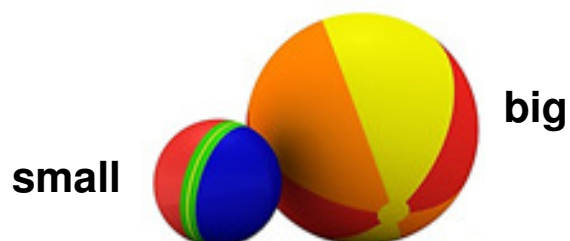
1.			2.		
	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
3.			4.		
	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
5.			6.		
	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>

## Activity

Colour the pictures and tick the object which is lighter:

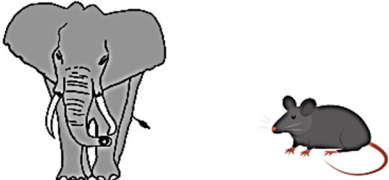
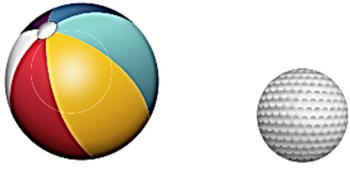





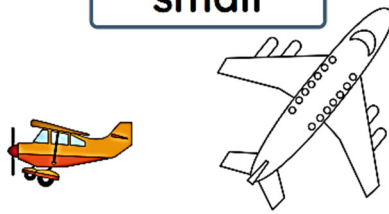


## Small and Big



## Activity

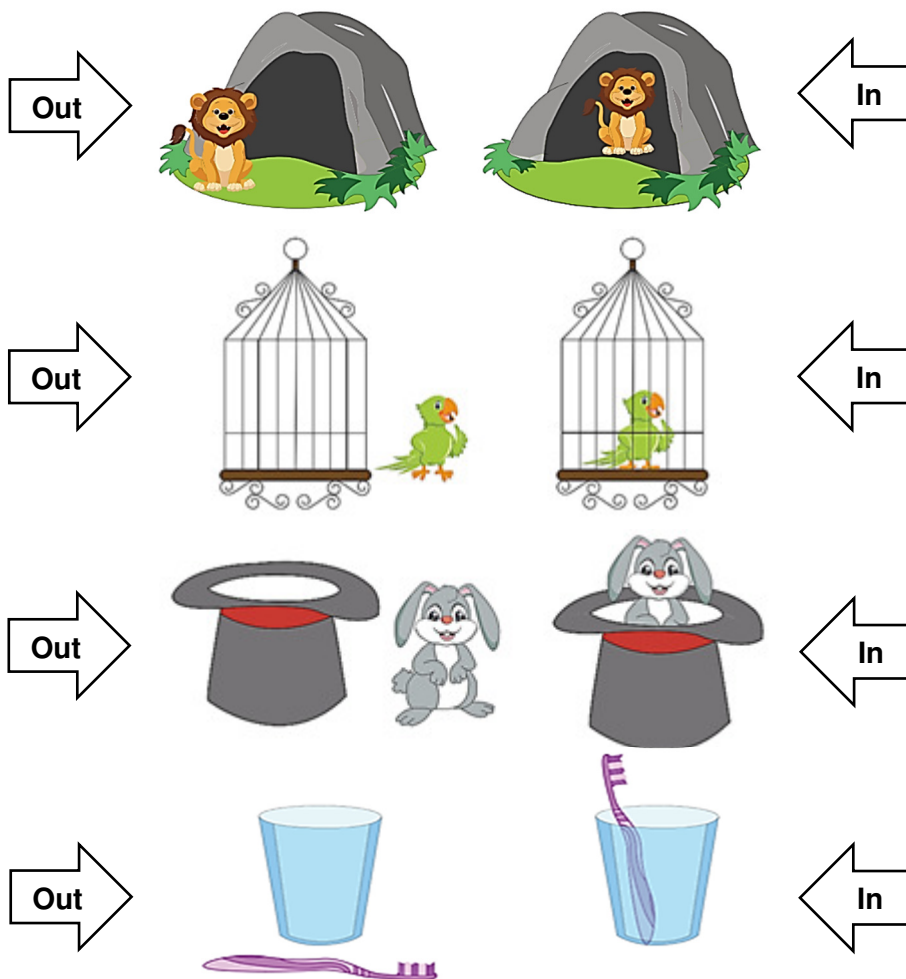
Circle the correct picture:

<p>big</p> 	<p>small</p> 
<p>small</p> 	<p>big</p> 
<p>big</p> 	<p>small</p> 
<p>big</p> 	<p>small</p> 



## In and Out

"In" signifies the object's position inside something, and "out" represents the object's position being outside something.



## Activity

Choose the correct option:

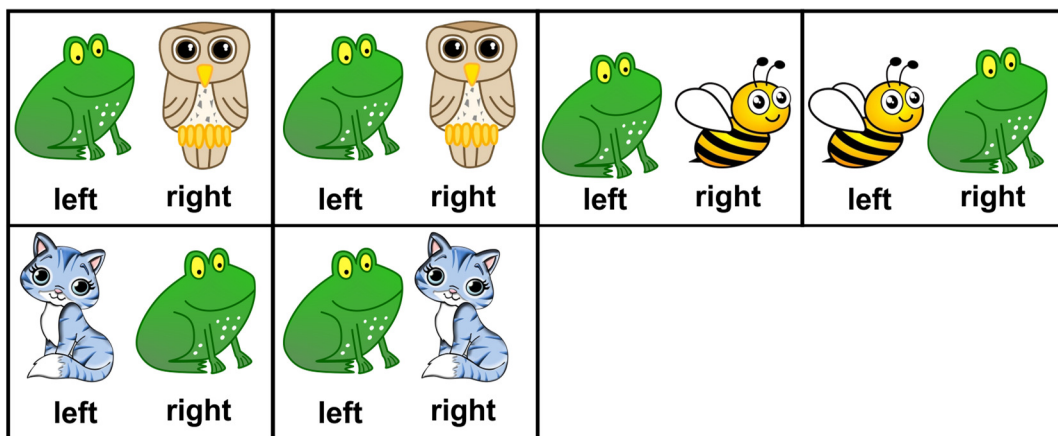
	<div>In</div> <div>Out</div>		<div>In</div> <div>Out</div>
	<div>In</div> <div>Out</div>		<div>In</div> <div>Out</div>
	<div>In</div> <div>Out</div>		

## Right and Left



Choose the correct answer:

Where is the frog, left or right?

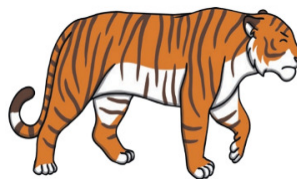


## Activity

1. Draw a star to the right of the house.



2. Draw a line to the left of the tiger.



3. Draw a star to the left of the tree.



4. Draw a triangle to the right of the apple.



## Activity

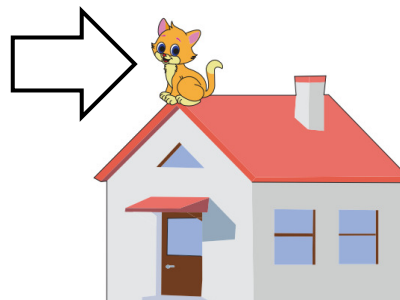
Write the names of the farm animals on the left and the safari animals on the right:



Left	Right

## Top and Bottom

1. The cat is on top of the house.



















2. The child is at the bottom of the slide.



## Basic Concepts on Comparison

Look at the cards and choose whether the butterfly is at the top or bottom.

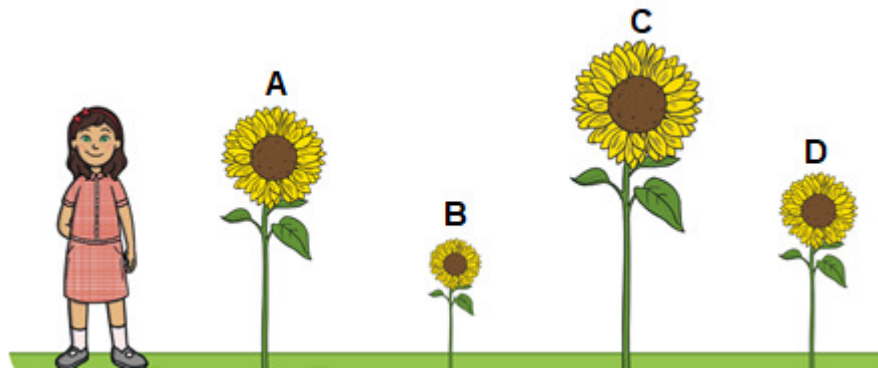
1.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>	2.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>
3.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>	4.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>
5.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>	6.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>
7.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>	8.  	<ul style="list-style-type: none"><li>• top</li><li>• bottom</li></ul>

## Tall and Short

Tall signifies greater height from end to end, while short represents smaller distance or height from end to end.







Which sunflower is the tallest?

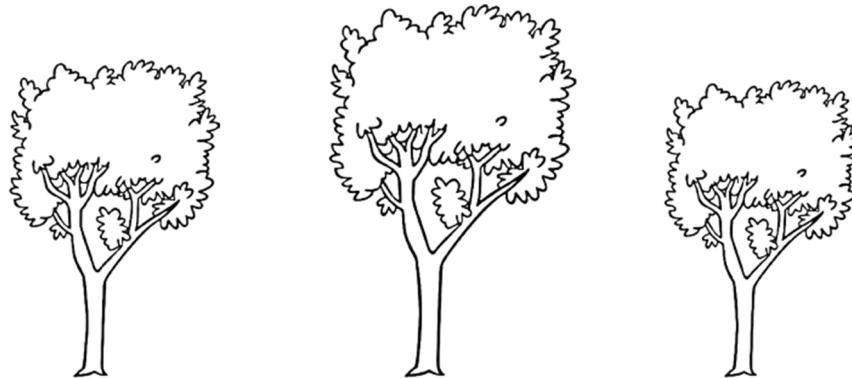
Which sunflower is the shortest?

## Activity

Colour the tallest dinosaur:



Colour the tallest tree:



Colour the shortest fairy:

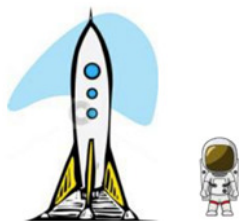


## Activity

1. Which is taller?



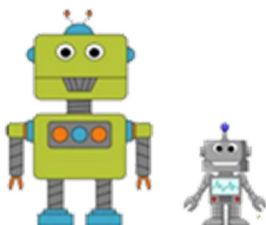
2. Which is shorter?



3. Which is taller?



4. Which is shorter?



5. Which is shorter?



6. Which is taller?



## Activity

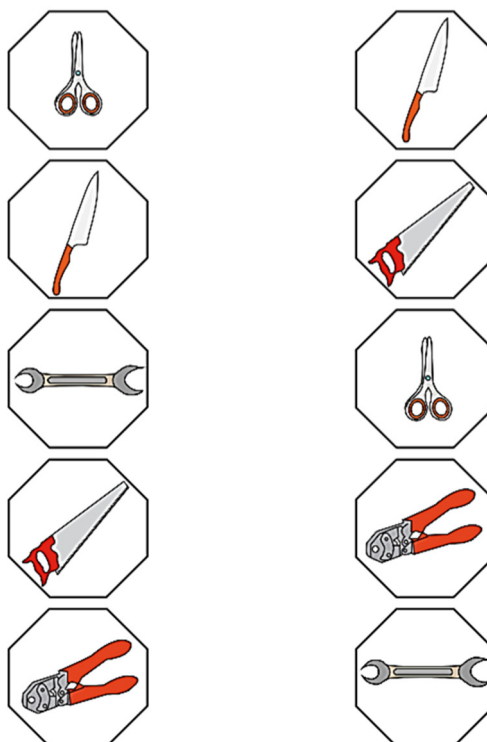


Can you find these pictures?

<b>Tall and short</b> 	<b>Longer and shorter</b> 	<b>High and low</b> 	<b>Longest and shortest</b> 	<b>Tallest and shortest</b> 
---	--	--	---	--

## Same and Different

Match the same pictures:



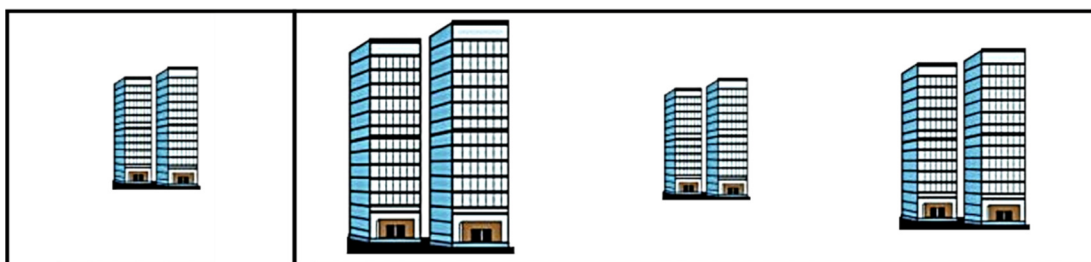
## Basic Concepts on Comparison

Choose the picture which is exactly the same as the one given on the left:

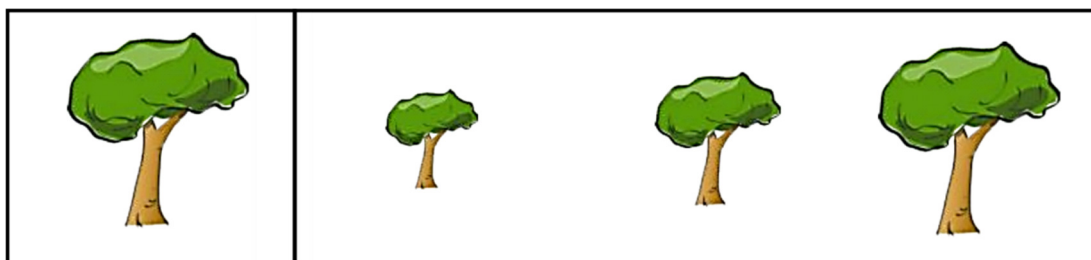
1.



2.

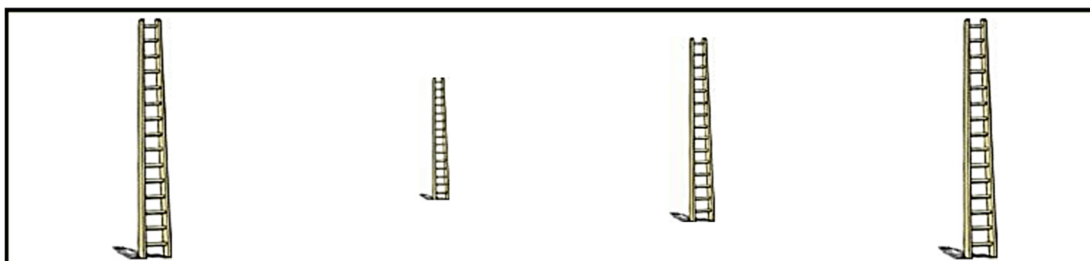


3.



Choose two exactly identical pictures:

1.



2.



## Thick and Thin

There are two slices of bread in the figure. The one on the left is the thick one and that on the right is the thin one. The thick bread has more height and width and hence it is said to be thick.



**Thick**



**Thin**

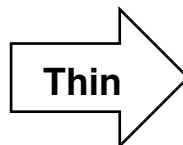
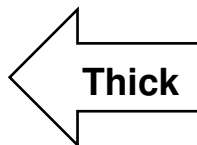
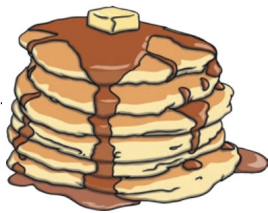


**Thick**

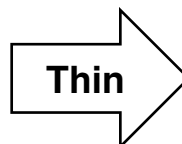
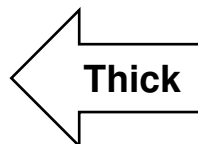


**Thin**

1.

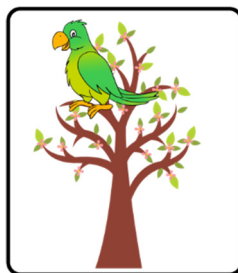


2.

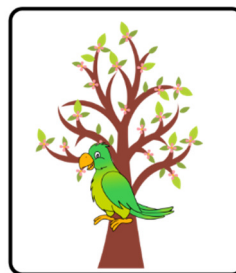


## Practice Questions

1. Which parrot is the lowest?



**A**

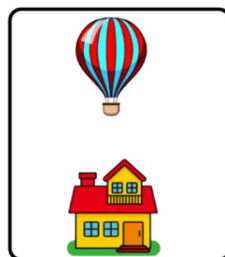


**B**

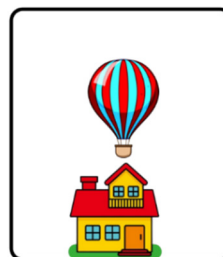
a. A

b. B

2. Which hot air balloon is the highest?



**A**



**B**

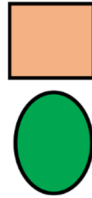
a. A

b. B



## Basic Concepts on Comparison

3. Where is the oval?



a. Bottom

b. Top

4. Where is the octagon?



a. Top

b. Bottom

5. The tree is on the \_\_\_\_\_.



a. left

b. right

6. The TV is on the \_\_\_\_\_.



a. left

b. right

7. The cupcake is on the \_\_\_\_\_.



a. left

b. right

## Basic Concepts on Comparison

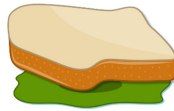
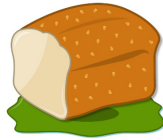
8. The t-shirt is on the \_\_\_\_\_.



a. left

b. right

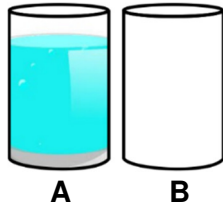
9. The thick loaf is on the \_\_\_\_\_.



a. left

b. right

10. Which glass is empty?



a. A

b. B

11. Which plate is full?



a. B

b. A

12. The butterfly is in the \_\_\_\_\_.



a. right

b. left

13. The rabbit is on \_\_\_\_\_ of the table.

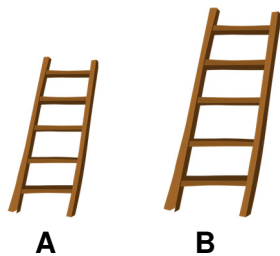


a. top

b. bottom

## Basic Concepts on Comparison

14. Which is the tallest ladder?



a. A

b. B

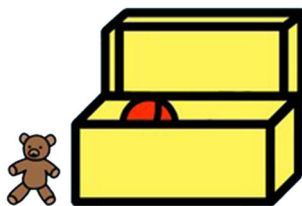
15. The ball is on the \_\_\_\_\_.



a. left

b. right

16. The ball is \_\_\_\_\_ the box.



a. inside

b. outside

17. The tomato is on the \_\_\_\_\_.



a. left

b. right

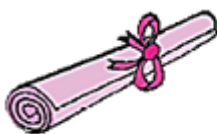
18. Which is the shortest giraffe?



a. A

b. B

19. Which of them is the thinnest?



a. A

b. B

20. The spiderman is at the \_\_\_\_\_ of the building.



a. right

b. left

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