

Class: VII	Subject: Mathematics	Day:1	Time duration:40 min
Name of the lesson/ unit	Perimeter & Area		
Topic/lesson	Perimeter and Area of Square & Rectangle		
Learning Objective	To be able to find area & perimeter of a square & rectangle		
Expected learning outcomes:	Student will be able to • Differentiate between perimeter and area. • Find the perimeter and area of square and rectangle. • Comprehend the real life problems based on area and perimeter of square & rectangle.		
Common misconception (if any):	• Find the perimeter instead of finding area & vice- versa. • Wrong calculation. • Wrong comprehension of problem. • Not writing units		
Prerequisite knowledge:	Definition of perimeter and area,2D shapes		
Assessment of qualifying knowledge:	Oral questioning ,Quiz		
Transaction methodology			
Starter/ warm up(Verbal): 10Min	Teacher will discuss the following situation and ask the question. <i>Ayush & Deeksha made pictures. Ayush made his picture on a rectangular sheet of length 10cm and breadth 5cm while Deeksha made hers on a rectangular sheet of length 20cm and breadth 10cm.</i> <i>Both have to frame and laminate separately.</i> 1. <i>What they will find area or perimeter to frame the picture?</i> 2. <i>Who has to pay more for framing the picture, if cost of framing is Rs.3/cm?</i> 3. <i>What they will find area or perimeter to laminate the picture?</i> 4. <i>Who has to pay more for laminating the picture, either cost of laminating is Rs.2/cm²?</i>		
Explanation and Video :10 Min.	After collecting response teacher will show the flipped video . Teacher will ask the following questions. <i>What would you need to find, area or perimeter, to answer the following?</i> 1. <i>How much space does your bag occupy on table ?</i>		

Guided Practice (Peer Work) Collaborative Work in Notebook : 15 Min	2. What is the length of a wire required to fence a rectangular park ? 3. What distance would you cover by taking 4 rounds of a square park Perimeter: Perimeter is the distance around a closed figure. Area: Area is the part of plane or region occupied by the closed figure. Perimeter of a regular polygon = number of side x length of one side. Perimeter of a square = 4 x side Perimeter of rectangle = 2 x (L + B) Area of square = side x side Area of rectangle = L x B Unit of Area is Sq unit Q. How you will identify that in the given question you need to find area or perimeter ? Q. For finding cost of land ; what to find ? Q. Which method will you use to find cost of land ? <i>Collaborative work- Student will discuss the exercise Questions with their peer and do in the notebook.</i> Teacher will collect responses and discuss the above questions on the board.
Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	NCERT book Try These Section. Teacher will collect the response and discuss in the class.
Home Learning	From book Assignment will be given
Resources	NCERT Book of Mathematics for Class VII Filpped video Activity-1. cut out different closed figures drawn on hard boards/ thick papers. Trace the figures in the given graph sheets. 2.count the exact number of square units occupied by the traced figure (Complete, Half, etc). and find out the approximate area of these figures.

Class: VII	Subject: Mathematics	Day:2	Time duration:40 min
Name of the lesson/ unit	Perimeter & Area		
Topic/lesson	Perimeter and Area of Square & Rectangle		
Learning Objective	To be able to find area & perimeter of a square & rectangle		
Expected learning outcomes:	Student will be able to • Differentiate between perimeter and area. • Find the perimeter and area of square and rectangle. • Comprehend the real life problems based on area and perimeter of square & rectangle.		
Common misconception (if any):	• Find the perimeter instead of finding area & vice- versa. • Wrong calculation. • Wrong comprehension of problem. • Not writing units		
Prerequisite knowledge:	Definition of perimeter and area,2D shapes		
Assessment of qualifying knowledge:	Oral questioning ,Quiz		
Transaction methodology			
Starter/ warm up Oral questions 5 Min	Teacher will ask students to How to find the cost of white wash of four walls and ceiling ?		
Peer discussion-10 Mins	Collaborative work-Students will discuss book questions with their peers and comprehend them.		
Questioning & discussion(Verbal) :5 Min	Teacher will collect responses and discuss the above questions on the board. Q. What if the area of two shapes are equal ? Q.How many sides we paint ? Q. How to find the cost of white wash of four walls ? Q. How to find area of wall to be paint if door is there ? Students will do book exercise independently .		

<u>Independent work followed by the board work-15 Min</u> Note book work	Teacher will discuss the solution on the board by calling individually students on the board.
Closure/ Plenary: (Independent work)Notebook (5 Min)	If a wire is in the shape of a square of side 8 cm. If the wire is rebent into a rectangle of length 12 cm. How can we find the breadth of the rectangle ?
Home Learning	From book Assignment will be given
Resources	NCERT Book of Mathematics for Class VII Filpped video

Class: VII	Subject: Mathematics	Day:3	Time duration:40 min
Name of the lesson/ unit	Perimeter & Area		
Topic/lesson	Area of Triangle and Parallelogram		
Learning Objective	To be able to find area & perimeter of a parallelogram		
Expected learning outcomes:	Student will be able to • Generalise the formulae of area of parallelogram and triangle. • Find the area of triangle and parallelogram. • Find the missing length of a triangle and parallelogram. • Comprehend the problems based on area of triangle and parallelogram		
Common misconception (if any):	• Find the perimeter instead of finding area & vice- versa. • Wrong calculation. • Wrong comprehension of problem. • Not writing units		
Prerequisite knowledge:	Definition of perimeter and area,2D shapes		
Assessment of qualifying knowledge:	Oral questioning ,Quiz		
Transaction methodology			
Starter/ warm up (Independent work and share with class)Notebook: 5 Min	Teacher will ask students to <u>draw a rectangle on a origami sheet and divide into two parts along diagonal .</u> 1. What is the shape you are getting after folding into two parts ? 2. Are they same (congruent) ? 3. What is the area of rectangle ? 4. What is the area of triangle (shape got after folding into two parts)? Teacher will collect responses and discuss with class.		
Video : 5 Min	Teacher will show the flipped video based on area of parallelogram and triangle		
GROUP ACTIVITY Collaborative Work : 10 Min	Teacher will ask students to be in a group of 4 students and do Activity given on Pg No. 210.NCERT book Students will use graph paper and generalise the area of parallelogram.		

Peer discussion-5 Mins Questioning & discussion(Verbal) :5 Min <u>Independent work followed by the board work-5 Min</u> Note book work	Following questions will be asked by the teacher: 1.Are the area of rectangle and parallelogram same ? 2. What is the relation between area of triangle and parallelogram? (Teacher will introduce area of ll gm then area of triangle to be teach in the class) <i>Collaborative work-Students will discuss Questions of book exercise with their peers and comprehend them.</i> Teacher will collect responses and discuss the above questions on the board. Q. What is the area of rectangle ? Q. What is the area of Parallelogram? Q. How they are linked ? Q. What shape you will get when you half the rectangle ? Q. What is the area of triangle ? <u>Students will do book exercise independently .</u> Teacher will discuss the solution on the board by calling individually students on the board.
Closure/ Plenary: (Collaborative work) (5 Min)	<i>(Collaborative work)</i><i>Notebook ; Student will discuss the with their Peer their learning of the day and teacher will collect response .</i>
Home Learning	From book Assignment will be given
Resources	NCERT Book of Mathematics for Class VII Filpped video, Activity by using graph sheet,origami paper.



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Class: VII	Subject: Mathematics	Day:4	Time duration:40 min
Name of the lesson/ unit	Perimeter & Area		
Topic/lesson	Perimeter and Area of Triangle and parallelogram		
Learning Objective	To be able to find area & perimeter of triangle and parallelogram		
Expected learning outcomes:	Student will be able to - Differentiate between perimeter and area. - Find the perimeter and area of square and rectangle. Comprehend the real life problems based on area and perimeter of square & rectangle.		
Common misconception (if any):	Student will be able to - Recall the formulae of area of llgm and triangle. - Find the area of triangle and parallelogram. - Find the missing length of a triangle and parallelogram. - Comprehend the problems based on area of triangle and parallelogram.		
Prerequisite knowledge:	- Idenditifying wrong altitude (height). - Calculation error. - Wrong comprehension of word problems. - Not writing units.		
Assessment of qualifying knowledge:	Oral questioning ,Quiz		
Transaction methodology			
Starter/ warm up (Notebook work): 5 Min	Student will do Q.1 of Try These on Pg No.212 NCERT and find the area of parallelogram and teacher will explain the reason after collecting the response from the different students .		
Direct Teaching Questions: 5 Min Peer Discussion followed by discussion in the class-5mins	After collecting response teachers will give following questions to discuss among peer. 1. What is the area of Triangle ? 2. What is the area of Parallelogram ? 3. If Area is given how you will find out the altitude ? 4. If one altitude and its respective base is given then how you will find out the other altitude ?		

Peer discussion-5 Min Questioning & discussion(Verbal) :5 Min <u>Independent work followed by the board work-10 Min</u> Note book work	<i>Collaborative work-Students will discuss Questions from exercise with their peers and comprehend them.</i> Teacher will collect responses and discuss the above questions on the board. Q. What is the perpendicular distance ? Q. What if area is given and base given ? Q. What is the relation between area of parallelogram and triangle ? <u>Students will do Exercise independently .</u> Teacher will discuss the solution on the board by calling individually students on the board.
Closure/ Plenary (Individual work) Notebook: (5 Min)	<i>Find the height 'x' if the area of the parallelogram is 24 cm^2 and its base is 4 cm.</i>
Home Learning	From book Assignment will be given
Resources	NCERT Book of Mathematics for Class VII Filpped video Activity-Exploring Area with Geoboard (square and rectangle)



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Class: VII	Subject: Mathematics	Day:5	Time duration:40 min
Name of the lesson/ unit	Perimeter & Area		
Topic/lesson	Circumference and Area of a Circle		
Learning Objective	To be able to find area & circumference of a circle		
Expected learning outcomes:	Student will be able to • Differentiate between perimeter and circumference. • Find the circumference and area of a circle. • Comprehend the word problems. • Solve the word problems based on real life situations		
Common misconception (if any):	• Find the perimeter instead of finding area & vice- versa. • Wrong calculation. • Wrong comprehension of problem. • Not writing units		
Prerequisite knowledge:	Definition of perimeter and area,2D shapes		
Assessment of qualifying knowledge:	Oral questioning ,Quiz		
Transaction methodology			
Starter/ warm up (Verbal) : 5 Min	What is the perimeter of a circle ? perimeter or some other term ? Why ? Teacher will collect response and differentiate between perimeter and circumference.		
Questioning & discussion(Notebook) :5 Min	Teacher will collect response and introduce the circumference and area of circle (Teacher will introduce circumference then area of circle) Circumference :The distance around a circular region is known as its circumference. Circumference of Circle = $2\pi r$ or πd ($d=2r$) Area of Circle =πr^2		
Video :5 Min	A Flipped Video will be shown to the students to build their concept.		
Peer discussion-5 Min	Collaborative work-Students will discuss book exercise with their peers and comprehend them.		

Questioning & discussion(Verbal) :5 Min Independent work followed by the board work-7Min Note book work	Teacher will collect responses and discuss the above questions on the board. <u>Students will do book exercise questions independently.</u> Teacher will discuss the solution on the board by calling individually students on the board.
Closure/ Plenary (Collaborative work)NotebookWork : (2 Min)	<i>Collaborative work- Draw a content map of all the concepts learnt in this Chapter so far.</i>
Home Learning	From book Assignment will be given
Resources	NCERT Book of Mathematics for Class VII Filpped video

Class: VII	Subject: Mathematics	Day:6	Time duration:40 min
Name of the lesson/ unit	Perimeter & Area		
Topic/lesson	Circumference and Area of a Circle		
Learning Objective	To be able to find area & circumference of a circle		
Expected learning outcomes:	Student will be able to • Differentiate between perimeter and circumference. • Find the circumference and area of a circle. • Comprehend the word problems. • Solve the word problems based on real life situations		
Common misconception (if any):	• Find the perimeter instead of finding area & vice- versa. • Wrong calculation. • Wrong comprehension of problem. • Not writing units		
Prerequisite knowledge:	Definition of perimeter and area,2D shapes		
Assessment of qualifying knowledge:	Oral questioning ,Quiz		
Transaction methodology			
Starter/ warm up- Activity-10mins	Student will ask students to measure the perimeter of a circle using a thread and area using a graph paper.		
Questioning & discussion(Verbal) :10 Min	Teacher will collect responses and discuss the above questions on the board. Q. How to find the remaining portion area if area of two portions are given ? Q. Does the shapes are same ? Q. What is the area and circumference of circle ?		
Independent work followed by the board	Students will do book exercise independently . Teacher will discuss the solution on the board by calling individually students on the board.		

work-13 Min Note book work	
Closure/ Plenary (Collaborative (7 Min)	<i>Collaborative work- Student will discuss their doubts from the book questions with and solve in the notebook followed by explanation by the teacher .</i>
Home Learning	From book Assignment will be given
Resources	NCERT Book of Mathematics for Class VII Filpped video Activity using graph paper and thread

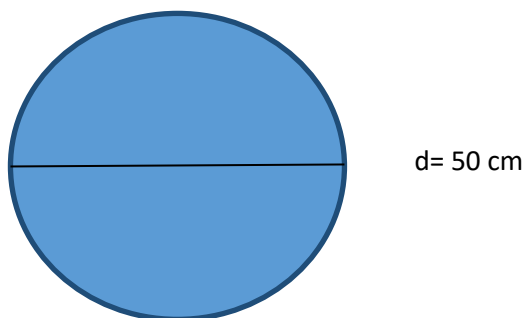
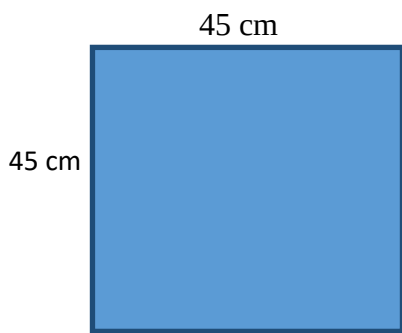


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Class: VII	Subject: Mathematics	Day:7	Time duration:40 min
Name of the lesson/ unit	Perimeter & Area		
Topic/lesson	Applications of Perimeter and Area		
Learning Objective	To be able to find solve word problems based on area and perimeter.		
Expected learning outcomes:	Students will be able to • Convert greater unit to a smaller unit and vice versa. • Comprehend the word problems based on application of Perimeter and Area. • Solve the word problems based on application of Perimeter and Area.		
Common misconception (if any):	• Finding area instead of circumference & vice versa. • Finding perimeter instead of area to find the rate of covering the floor • Calculation error. • Wrong comprehension of word problems. • Incorrect Interpretation • Conversion of units of areas on the basis of conversion of units of length • Not writing units.		
Prerequisite knowledge:	How to find perimeter and area of square,rectangle, circle,parallelogram?		
Assessment of qualifying knowledge:	Oral questioning ,Quiz		
Transaction methodology			
Starter/ warm up (Independent work and share with class)Notebook: 5 Min	Teacher will ask students to convert units. 1. 1 cm = _____mm 2. 1 cm²= _____ × 1 mm² 3. 1 m² = _____cm² 4. 1 hectare = _____ m² 5. 1 cm² = _____m² After collecting response teacher will discuss in the class.		
Peer discussion-10Min	Collaborative work-Students will discuss Questions of book exercise with their peers and comprehend them.		
Questioning & discussion(Verbal) :5 Min	Teacher will collect responses and discuss the above questions on the board. Q.How to convert sq m to hectare ?		

Independent work followed by the board work-15 Min Note book work	Q. How to find the area of path if build outside the rectangular park ? Q.How to find the area of path if build inside the rectangular park ? Q. Do we need to find the area multiple times ? Students will do book exercise independently . Teacher will discuss the solution on the board by calling individually students on the board.
Closure/ Plenary(Collaborative work): (5 Min)	<i>Collaborative work- Student will make a web chart of Perimeter and Area in a group of 4 students on A4 size coloured sheet.</i>
Home Learning	Following Assignment will be given on final day.Attached below
Resources	NCERT Book of Mathematics for Class VII Filpped video

1. A pizza factory has come out with two kinds of pizza. A square pizza of side 45 cm costs Rs 150 and a circular pizza of diameter 50 cm costs Rs 160.



Area of square = Side x Side

Area of circle = πr^2

- Area of square pizza = _____
- Area of circular pizza = _____
- Which pizza is a better deal ? _____

Show your calculations