

PM SHRI KENDRIYA VIDYALAYA DHARMAPURI

HOLIDAY HOMEWORK

Class 6 | Mathematics

15 October to 24 October 2026

Name: _____ Section: _____ Roll No.: _____

Instructions: Attempt 4 questions each day. Question 1 is a basics question to strengthen your foundation; read the Remember line first. Write neatly in a notebook, show all steps, and use a ruler and pencil for figures.

Day 1: Thursday, 15 October

Whole Numbers and Place Value

Remember: In the Indian system, places go Ones, Tens, Hundreds, Thousands, Ten Thousands, Lakhs, Ten Lakhs, Crores.

- Q1. **Basics:** Write the tables of 6, 7 and 8 up to 12 from memory.
- Q2. Write 4,56,78,321 in words and give the place value of the digits 5 and 7.
- Q3. Write the predecessor and successor of 99,999 and of 1,00,000.
- Q4. Arrange in descending order: 45,082; 45,820; 4,582; 54,028. Then form the greatest and smallest 5-digit numbers using the digits 3, 0, 7, 5, 9 (no repetition).

Day 2: Friday, 16 October

Fractions

Remember: A fraction is numerator/denominator. To add or subtract fractions, first make the denominators equal.

- Q1. **Basics:** Draw a rectangle divided into 8 equal parts with 3 parts shaded. Write the shaded part as a fraction.
- Q2. Convert $17/5$ into a mixed fraction and $3\frac{2}{7}$ into an improper fraction.
- Q3. Arrange in ascending order: $3/4$, $5/6$, $2/3$.
- Q4. Find $2/3 + 3/4$ and $5/6 - 1/4$.

Day 3: Saturday, 17 October

Playing with Numbers

Remember: A prime number has exactly two factors: 1 and itself. 1 is neither prime nor composite.

- Q1. **Basics:** Write all the factors of 36 and the first six multiples of 9.
- Q2. Test the number 3,456 for divisibility by 2, 3, 4, 6 and 9.
- Q3. Find the prime factorisation of 84 and of 120.
- Q4. Find the HCF and LCM of 24 and 36.

Day 4: Monday, 19 October

Integers

Remember: On a number line, numbers increase towards the right. Adding a negative number moves you to the left.

- Q1. **Basics:** Draw a number line from -6 to 6 and mark -4 , 0 , 3 and -1 .
- Q2. Find: $(-7) + 12$, $(-5) + (-8)$, $9 - (-4)$.
- Q3. Arrange in ascending order: -3 , 5 , -8 , 0 , 2 .
- Q4. The temperature at 6 am is -3°C . It rises by 7°C by noon and falls by 5°C by evening. What is the evening temperature?

Day 5: Wednesday, 21 October

Decimals

Remember: Line up the decimal points when adding or subtracting decimals.

- Q1. **Basics:** Write as decimals: $\frac{3}{10}$, $\frac{45}{100}$, $\frac{7}{1000}$. Then write 0.6 and 0.25 as fractions.
- Q2. Find: $12.45 + 3.8 + 0.075$ and $15.2 - 8.67$.
- Q3. Find: 3.6×10 , 4.25×100 , $25.6 \div 10$, 2.5×4.2 .
- Q4. Ria bought 2.5 m of cloth at ₹48.50 per metre. How much did she pay?

Day 6: Thursday, 22 October

Basic Geometry and Mensuration

Remember: Perimeter of rectangle = $2(l + b)$, area = $l \times b$. Perimeter of square = $4a$, area = $a \times a$.

- Q1. **Basics:** How many sides do a pentagon, hexagon and octagon have? Write the degree measure of a right angle, a straight angle and a full turn.
- Q2. Find the perimeter and area of a rectangle $12 \text{ cm} \times 8 \text{ cm}$ and of a square of side 9 cm.
- Q3. Draw an angle of 70° using a protractor. Classify the angles 35° , 90° , 120° and 180° as acute, right, obtuse or straight.
- Q4. A square park of side 25 m is fenced with 3 rounds of wire. Find the length of wire needed.

Day 7: Friday, 23 October

Ratio and Proportion

Remember: A ratio compares two quantities of the same kind. Simplify it by dividing both terms by a common factor.

- Q1. **Basics:** Simplify the ratios $12 : 18$ and $25 : 40$.
- Q2. Divide ₹120 between two children in the ratio $2 : 3$.
- Q3. Are $3 : 4$ and $9 : 12$ in proportion? Give a reason.
- Q4. If 5 pens cost ₹40, find the cost of 8 pens.

Day 8: Saturday, 24 October

Algebra Basics and Mental Maths

Remember: A variable is a letter standing for an unknown number. $3x$ means $3 \times x$.

- Q1. **Basics:** Do mentally: 15×6 , $125 + 78$, $1000 - 457$, $144 \div 12$.
- Q2. Write using a letter: a number increased by 5; 7 times a number; the perimeter of a square of side a .
- Q3. Find the value of $3x + 2$ when $x = 4$, and of $2a - 5$ when $a = 6$.
- Q4. Solve: $x + 7 = 15$ and $3y = 21$.

Happy Holidays and Happy Dussehra!

PM SHRI KENDRIYA VIDYALAYA DHARMAPURI

HOLIDAY HOMEWORK

Class 7 | Mathematics

15 October to 24 October 2026

Name: _____ Section: _____ Roll No.: _____

Instructions: Attempt 4 questions each day. Question 1 is a basics question to strengthen your foundation; read the Remember line first. Write neatly in a notebook, show all steps, and use a ruler and pencil for figures.

Day 1: Thursday, 15 October

Integers

Remember: Same signs: add and keep the sign. Different signs: subtract and keep the sign of the larger. Negative $\times$ negative = positive.

- Q1. Basics:** Do mentally: $(-8) + (-3)$, $6 - (-9)$, $(-4) \times (-5)$, $(-36) \div 4$.
- Q2.** Evaluate: $(-15) \div (-3) \times 4 - 7$.
- Q3.** Subtract -9 from 4, and subtract 5 from -12 .
- Q4.** The temperature at noon is 5°C and falls by 3°C every hour. What is the temperature after 6 hours?

Day 2: Friday, 16 October

Fractions and Decimals

Remember: To divide by a fraction, multiply by its reciprocal.

- Q1. Basics:** Find the LCM of 12 and 18 and the HCF of 24 and 36.
- Q2.** Simplify: $2/3 + 3/5 - 1/2$.
- Q3.** Find: $2\frac{1}{2} \times 1\frac{3}{5}$ and $3/4 \div 9/16$.
- Q4.** Find: 4.5×0.2 and $7.2 \div 0.06$, and convert $3/8$ into a decimal.

Day 3: Saturday, 17 October

Simple Equations

Remember: Whatever you do to one side of an equation, do the same to the other side.

- Q1. Basics:** Write as expressions: 5 more than thrice x ; 4 less than twice y . What is the coefficient of x in $7x^2 + 3x$?
- Q2.** Solve: $3x - 5 = 16$ and $x/4 + 3 = 9$.
- Q3.** Solve: $2(x + 3) = 18$ and $5x - 7 = 3x + 9$.
- Q4.** The sum of two consecutive numbers is 75. Find the numbers.

Day 4: Monday, 19 October

Percentage, Ratio and Profit and Loss

Remember: Percent means per hundred. $\text{SP} = \text{MP} - \text{Discount}$. $\text{Profit \%} = (\text{Profit} \div \text{CP}) \times 100$.

- Q1. Basics:** Convert: $3/4$ to a percentage, 40% to a fraction, 0.25 to a percentage.
- Q2.** Find 15% of 480, and find what percent 36 is of 120.
- Q3.** A shirt marked ₹800 is sold at a 20% discount. Find the selling price.
- Q4.** An article bought for ₹250 is sold for ₹300. Find the profit percent. Also divide ₹360 in the ratio 4 : 5.

Day 5: Wednesday, 21 October

Lines, Angles and Triangles

Remember: Angles of a triangle add up to 180° . An exterior angle equals the sum of the two interior opposite angles.

- Q1. **Basics:** Find the complement of 65° and the supplement of 110° .
- Q2. The angles of a triangle are in the ratio 2 : 3 : 4. Find each angle.
- Q3. The exterior angle of a triangle is 110° and one interior opposite angle is 45° . Find the other interior opposite angle.
- Q4. Find the hypotenuse of a right triangle with legs 6 cm and 8 cm. Is a triangle with sides 5, 12, 13 a right triangle?

Day 6: Thursday, 22 October

Perimeter and Area

Remember: Triangle area = $\frac{1}{2} \times \text{base} \times \text{height}$. Parallelogram area = $\text{base} \times \text{height}$. Circle: $C = 2\pi r$, $A = \pi r^2$.

- Q1. **Basics:** Write from memory the area of a rectangle, square, triangle and circle, and the circumference of a circle.
- Q2. Find the area of a triangle with base 14 cm and height 9 cm, and of a parallelogram with base 12 cm and height 7 cm.
- Q3. For a circle of radius 7 cm, find the circumference and area ($\pi = 22/7$).
- Q4. A room $6 \text{ m} \times 4 \text{ m}$ is to be tiled with square tiles of side 50 cm. How many tiles are needed?

Day 7: Friday, 23 October

Exponents and Powers

Remember: $a^m \times a^n = a^{m+n}$, $a^m \div a^n = a^{m-n}$, $(a^m)^n = a^{mn}$, $a^0 = 1$.

- Q1. **Basics:** Write the squares of 1 to 20 and the cubes of 1 to 10 from memory.
- Q2. Simplify: $2^3 \times 2^4$, $5^6 \div 5^2$, $(3^2)^3$.
- Q3. Write 72,000 in standard form and 3.5×10^4 in usual form.
- Q4. Evaluate: $(-2)^5$, 7^0 and $(2/3)^3$.

Day 8: Saturday, 24 October

Data Handling, Probability and Mental Maths

Remember: Mean = $\text{sum} \div \text{number of observations}$. Mode is the most frequent value. Median is the middle value in order.

- Q1. **Basics:** Do mentally: 25×16 , $1000 - 378$, $3/4$ of 80, 15% of 200.
- Q2. Find the mean and median of 12, 15, 18, 20, 25, and the mode of 3, 5, 3, 7, 5, 3, 9.
- Q3. The mean of 5 numbers is 20. Find their sum. If a sixth number 32 is added, find the new mean.
- Q4. A fair die is thrown once. Find the probability of getting an even number and of getting a number less than 3.

Happy Holidays and Happy Dussehra!

HOLIDAY HOMEWORK 2026–27

CLASS VIII | MATHEMATICS

Textbook: *Ganita Prakash – Part 1*

Name: _____

Class & Section: _____

Roll No.: _____ **Date:** _____

MATHEMATICS: EXPLORE • DISCOVER • CREATE

Theme: “Maths Beyond the Classroom”

Dear Students,

Mathematics is not just about numbers and calculations; it is a language that helps us understand the world around us. During your holidays, become a **Maths Explorer** and discover how mathematical ideas connect with nature, art, shopping, games and everyday life.

Complete the following activities neatly and creatively in your Mathematics notebook or on A4-size sheets.

Sanjeev Kumar

P.G.T (Maths)

ACTIVITY 1: THE MATHEMATICAL DETECTIVE

Topic: Patterns and Numbers

1. Observe the numbers around you—on a calendar, clock, vehicle number plate or newspaper.
2. Find any five interesting number patterns.
3. Write the rule behind each pattern and extend it by three more terms.

Example: 2, 6, 12, 20, 30, , , _

Challenge: Can you create a number pattern of your own that even your classmates will find difficult to solve?

ACTIVITY 2: INTEGER TREASURE HUNT

Topic: Integers and Their Applications

Imagine you are exploring the mountains of Himachal Pradesh.

- Starting point: Sea level (0 m)
□ Climb 350 m.
- Descend 125 m.
- Climb another 275 m. □
Descend 600 m.

Tasks:

1. Represent each movement using positive and negative integers.
2. Find your final position relative to the starting point.
3. Draw a vertical number line to show your journey.
4. Create a similar integer story using a lift, a submarine or a bank account.

ACTIVITY 3: MATHS IN ART

Topic: Symmetry and Geometrical Patterns

Create a colourful design using Indian folk art, rangoli, Madhubani motifs or geometric shapes.

Your design must include:

- At least four different geometrical shapes.
- One example of line symmetry.
- A repeating pattern.
- Labels showing the mathematical properties used.

Think creatively: Can you design a logo for your school using mathematical shapes?

ACTIVITY 4: THE SMART SHOPPER

Topic: Percentages and Financial Mathematics

Visit a nearby shop or use a newspaper advertisement to prepare a shopping bill for any five items.

Item	Marked Price (₹)	Discount (%)	Selling Price (₹)
School bag			
Water bottle			
Notebook			
Geometry box			
Lunch box			

Tasks:

1. Calculate the discount on each item.
2. Find the total marked price and total selling price.
3. Calculate the total money saved.
4. Identify the item on which you saved the most money.

Note: You may use imaginary prices and discounts.

ACTIVITY 5: CRACK THE MATHS CODE

Topic: Algebraic Thinking

Let each letter represent a different number.

- $A + A = 18$
- $A + B = 15$
- $B + C = 11$

Find the values of A, B and C.

Now create your own mathematical code using three letters and at least three clues. Write its solution separately.

Bonus: Give your code a detective-story title!

ACTIVITY 6: MATHEMATICS IN MY HOME

Topic: Measurement, Area and Perimeter

Choose one rectangular room in your house.

1. Measure its length and breadth using a measuring tape.
2. Calculate its perimeter and area.
3. Draw a rough floor plan and label the measurements.
4. Estimate the cost of covering the floor with tiles if the cost is ₹80 per square metre.

Reflection: How does mathematics help us plan a house efficiently?

ACTIVITY 7: MATHEMATICS IN NATURE

Topic: Observation and Data Handling

Observe any ten leaves, flowers or other natural objects.

- Record their approximate lengths in centimetres.
- Arrange the measurements in ascending order.
- Find the longest and shortest measurements.
- Calculate the range (longest minus shortest). □ Represent the data using a bar graph.

Eco-message: Observe nature carefully without damaging plants.

ACTIVITY 8: BECOME A MATHS GAME DESIGNER

Topic: Logical Reasoning and Problem-Solving

Design an original mathematics game using a dice, number cards or a simple board.

Your game must have:

- A creative name.
- Clear rules.
- At least ten questions or challenges.
- A scoring system.
- One winning condition.

Play the game with a family member and record who wins.

ACTIVITY 9: MATHS CHALLENGE CORNER

Solve the following brain teasers.

1. I am a two-digit number. My tens digit is twice my units digit, and the sum of my digits is 9. Who am I?
2. A number is multiplied by 3 and then increased by 7. The result is 34. Find the number.
3. The perimeter of a square is 48 cm. Find its side and area.

4. A temperature changes from 5°C to -7°C . What is the total decrease in temperature?
5. Find the next two terms: 1, 4, 9, 16, 25, , .

Creative challenge: Write two original brain teasers of your own and provide their answers.

ACTIVITY 10: MY MATHEMATICS REFLECTION JOURNAL

Complete these sentences in your own words:

- One mathematical idea I enjoyed exploring was _____.
 - One real-life situation where I used mathematics was _____.
 - The activity that challenged me the most was _____.
 - One mathematical question I would like to investigate is _____. □ I can make mathematics more enjoyable by _____.
-

₹ BONUS TASK: MATHS AROUND BHISIANA

Prepare a mini-project titled “**Mathematics in My Neighbourhood.**”

Observe any three places or situations around you, such as a grocery shop, a playground, a garden or a road.

Identify at least one mathematical concept in each situation and explain how it is used.

You may include photographs, drawings, calculations or labelled sketches.

GENERAL INSTRUCTIONS

1. Complete the work independently and show all necessary calculations.
2. Use A4-size sheets or your Mathematics notebook, as instructed by your teacher.
3. Make your work neat, colourful, original and mathematically correct.
4. Include diagrams, tables and graphs wherever required.
5. Write your name, class, section and roll number on every loose sheet.
6. Do not copy answers directly from the internet or from classmates.
7. Ensure that your work reflects your own observations and creativity.
8. You may choose any Five activities in given ten

HAPPY HOLIDAYS!

“Mathematics is not about numbers, equations, computations or algorithms: it is about understanding.”

Keep Exploring • Keep Questioning • Keep Learning