

Teacher's Resources

Teacher's Manual

Oxford Educate with Geometool- Oxford Educate is an exciting digital aid that integrates in a single resource an eBook with interactive teaching tools and learning materials. Oxford Educate includes animations, video clips, assessments, answer keys and much more. Each of these teaching aids is provided on the relevant pages of the eBook. This innovative resource includes interactive tools, such as zoom in or out, sticky notes, hide text, spotlight, a pencil, an eraser, and a highlighting pen. It includes- Animations, Video Clips, Printable Documents and Geometool.

The Test Generator accompanying Oxford Educate is an innovative, easy-to-use assessment tool. It is designed to aid teachers in creating a variety of test papers from an extensive pool of questions for effective evaluation.

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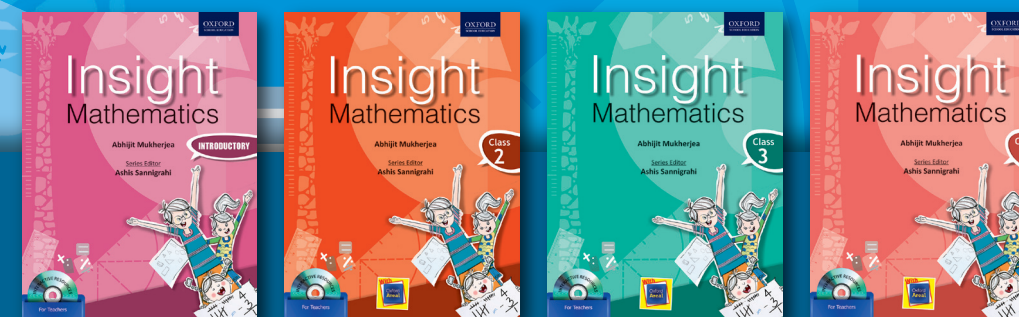
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**NEW
COURSE**

Abhijit Mukherjea

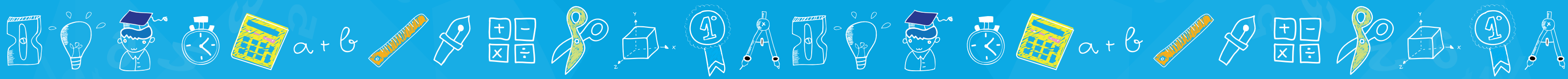
Series Editor
Ashis Sannigrahi



COURSE COMPONENTS

- Books for Classes Primer to 8
- Teacher's Manual
- Oxford Educate with Test Generator

BRANCH OFFICES



Insight Mathematics is a well-structured and child-friendly series of nine books that aims to draw children into the vibrant world of mathematics. It conforms to the syllabus prescribed by the Inter-State Board for Anglo-Indian Education.

The series aims to engage students in mathematics by providing real-life situations in topic explanations, solved examples and exercises to ensure that the learner appreciates the applicability of mathematics. The exercises provided in and after each chapter cover a wide range of questions, enabling students to gain expertise in a particular topic.



Revise: A quick recap of previous year's concept

REVISE

1. The pictograph shows number of rides taken by children in an amusement park. Look at the pictograph and answer the questions.

(a) Which is the most popular ride?
 (b) Which is the least popular ride?
 (c) How many children rode 'B' to a wharf?
 (d) How many more children rode Merry-go-round than Toy train?

2. Look at the bar graph and answer the questions that follow.

Camps chosen by Class 3 students

Camp	Number of students
Boys' camp	10
NCC	15
Art camp	12
Girls' camp	10
Music	8

(a) What was the most popular camp?
 (b) How many students were there in Class 3?
 (c) How many camps were there?
 (d) How many more students chose NCC over Boy Scouts?

Maths Around us: The real-life connect to observe the applicability of each topic

MATHS AROUND US

Two days before Diwali, Ajay was sent to the sweet shop to order 88 packets of sweets. The shopkeeper asked Ajay, "Why does your father need so many packets?"

Ajay replied, "He gifts sweets to all his business friends and relatives around Diwali. The shopkeeper smiled and said, "Okay then, but where's the money for so many sweets? Each packet is going to cost you ₹ 125."

"What?" exclaimed Ajay. "You think Papa would send eleven thousand rupees through me?" "Oh! I was just joking Ajay," said the shopkeeper, "but tell me, where did you learn to calculate that fee?"

Ajay had noticed that the multiplicand was 125 which is $1000 \div 8$. The multiplier was 88. Ajay mentally calculated 125×88 as 1000 which is 1000.

You Try It!: Quick assessment of comprehension of new topics

YOU TRY IT!

Mark the angles formed in the following objects.

Mental Maths helps in recognising patterns, estimating results and quick calculations

MENTAL MATHS

Say true or false.

(a) $\angle ABD$ and $\angle DBC$ are supplementary angles.
 (b) $\angle ABD$ is a right angle.
 (c) $\angle DBC$ is an acute angle.

Exercises within chapters test the understanding of concepts learnt

REVISION EXERCISE

1. Fill in the blanks.

(a) $25 \times 10 = 250$, $25 \times 100 = 2500$, $25 \times 1000 = 25000$

(b) $432 \times 10 = 4320$, $432 \times 100 = 43200$

2. Find the average of the following sets of numbers.

(a) 15, 16 and 17
 (b) 100, 105, 110 and 115
 (c) 200, 210, 220, 230 and 240
 (d) 245, 255, 265, 275, 285 and 295

3. Use round-off to round off the following numbers to the nearest tens, hundreds, thousands, lakhs and crores.

(a) Round off to the nearest tens: 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99

(b) Round off to the nearest hundreds: 120, 150, 180, 210, 240, 270, 300, 330, 360, 390, 420, 450, 480, 510, 540, 570, 600, 630, 660, 690, 720, 750, 780, 810, 840, 870, 900, 930, 960, 990

(c) Round off to the nearest thousands: 1200, 1500, 1800, 2100, 2400, 2700, 3000, 3300, 3600, 3900, 4200, 4500, 4800, 5100, 5400, 5700, 6000, 6300, 6600, 6900, 7200, 7500, 7800, 8100, 8400, 8700, 9000, 9300, 9600, 9900

(d) Round off to the nearest lakhs: 12000, 15000, 18000, 21000, 24000, 27000, 30000, 33000, 36000, 39000, 42000, 45000, 48000, 51000, 54000, 57000, 60000, 63000, 66000, 69000, 72000, 75000, 78000, 81000, 84000, 87000, 90000, 93000, 96000, 99000

(e) Round off to the nearest crores: 120000, 150000, 180000, 210000, 240000, 270000, 300000, 330000, 360000, 390000, 420000, 450000, 480000, 510000, 540000, 570000, 600000, 630000, 660000, 690000, 720000, 750000, 780000, 810000, 840000, 870000, 900000, 930000, 960000, 990000

Revision Exercises at the end of each chapter to provide practice

EXERCISE 6.4

1. Simplify the following.

(a) $2.5 + 3.2 - 2.8 + 1.5$
 (b) $4.7 - 6.5 + 1.3 - 8.4 + 3$
 (c) $0.6 + (2.3 + 1.2) + 0.3 - 15.75 + 6.3$
 (d) $(1 - 0.1) + 0.1 + 0.1 + 0.1 + 0.1 + 0.1$
 (e) $2.8 + 3.6 - 1.5 + 5.4 - 3.02 + 2.6$
 (f) $1.5 + 1.3 + 1.2 + 1.1 + 1.0 + 0.9 + 0.8 + 0.7 + 0.6 + 0.5 + 0.4 + 0.3 + 0.2 + 0.1$
 (g) $12.3 + 0.8 + 4.5 - 1.8 - 3.02$

2. A person is carrying a 3 kg bag and a 2 kg bag on his head. He is also carrying a 10 kg bag in his hand. What is the total weight that the person is carrying?

3. A 5 L can has 3.5 L of water and a 7 L can has 4.2 L of water. How many more litres of water are needed to fill up both the cans?

4. Manu goes to the market with ₹ 100 in his pocket. He buys 4 chess sets for ₹ 20 each, an exercise book for ₹ 15.30 and 2 pencils for ₹ 1.80 each. How much money is left with Manu?

5. A cook uses 0.015 L of cooking oil every day. How much cooking oil does he use in a week?

6. Harshith buys 4 tickets at a cinema hall at ₹ 25.45 each. After he buys 6 packets of popcorn costing ₹ 25 each, he is left with ₹ 20.40 in his pocket. How much money did Harshith carry to the cinema hall?

7. One litre of petrol costs ₹ 48.50. How many litres of petrol can be bought with ₹ 1200.50?

8. The distance between New Jangpang and Kolkata is 463.3 km. If a train can cover 40.2 km in one hour, how much time would it take to travel from Kolkata to New Jangpang, if the train maintains a uniform speed?

Worksheets provide additional practice

WORKSHEET 3-LINES AND ANGLES

Practice Test Papers at the end of each book prepare students for examination (in Primary)

PRACTICE TEST PAPER 3

1. Write the place value and period of the coloured digit in the following numerals.

Numerical	Indian place-value system	International place-value system
27423607	70,00,000	Lakhs
28705148		Millions
64537849		
39245755		

2. Write the value of DCC + XL in Hindu-Arabic numerals.

3. Perform the following fundamental operations.

(i) $564 \times 12 = 6768$ (ii) $50893267 + 6463274$ (iii) $1877994 + 122095$
 (iv) $5879473 - 204810$ (v) $70000000 - 35464219$ (vi) $87654321 - 12345678$
 (vii) 5039×745 (viii) $10848 \div 1447$ (ix) 21481×1994
 (x) $300718 \div 895$ (xi) $402613 \div 1029$ (xii) $4073048 \div 534$

4. What will be the maximum length of a piece of rope if two long ropes, 48 m and 78 m long, are cut into equal pieces?

Unit Test Papers at the end of each unit prepare students for examination (in middle school)

UNIT TEST PAPER

Number Systems

1. Apply the distributive property of multiplication to find the following products.

(a) $101 \times 101 = 101 \times (100 + 1) = 101 \times 100 + 101 \times 1$
 (b) $102 \times 102 = 102 \times (100 + 2) = 102 \times 100 + 102 \times 2$
 (c) $103 \times 103 = 103 \times (100 + 3) = 103 \times 100 + 103 \times 3$
 (d) $104 \times 104 = 104 \times (100 + 4) = 104 \times 100 + 104 \times 4$
 (e) $105 \times 105 = 105 \times (100 + 5) = 105 \times 100 + 105 \times 5$
 (f) $106 \times 106 = 106 \times (100 + 6) = 106 \times 100 + 106 \times 6$
 (g) $107 \times 107 = 107 \times (100 + 7) = 107 \times 100 + 107 \times 7$
 (h) $108 \times 108 = 108 \times (100 + 8) = 108 \times 100 + 108 \times 8$
 (i) $109 \times 109 = 109 \times (100 + 9) = 109 \times 100 + 109 \times 9$

2. Write the greatest of three integers on the number line and give their sum.

(a) $-10, -5, 0, 5, 10$
 (b) $-15, -10, -5, 0, 5, 10, 15$
 (c) $-20, -15, -10, -5, 0, 5, 10, 15, 20$
 (d) $-25, -20, -15, -10, -5, 0, 5, 10, 15, 20, 25$

3. The perimeter of a square is 40 cm. Find the length of one side.

4. The perimeter of a rectangle is 100 cm. If one of the sides is 30 cm, find the length of the other side.

5. An athlete runs a high jump hurdle at 1.8 m. How high should the height of the hurdle be in a square field? (The height of the hurdle should be the same as the length of the side of the square field.)

6. Find the perimeter of a square with side length 10 cm.

7. The length of a rectangular field is 120 m and its breadth is 80 m. What should be the length of the longer side of a square field with the same area as the rectangular field?

8. Find the perimeter of a square with side length 10 cm.

9. The area of a square is 100 m². Find the length of one side.

Highlights! for recapitulation of the topics covered (Books 6-8; scattered throughout in Primary)

HIGHLIGHTS

- A decimal has two parts – whole part and decimal part.
- Like decimal numbers have an equal number of digits to the right of the decimal point.
- To add or subtract decimals, convert the number of digits after the decimal points of the decimals to like decimals. The decimal numbers are arranged vertically with the decimal point in one column, and then each column is added or subtracted.
- When the multiplier is 10, 100, 1000, etc., the product obtained on multiplying them with a decimal number is a decimal number in which the decimal point has shifted to the right by as many places as there are zeros after 1 in the multiplier.
- On multiplying a decimal number with a whole number, the product will have as many digits after the decimal point as the multiplicand.
- When multiplying a decimal number with a decimal number, the product will have as many digits after the decimal point as the sum of the number of digits after the decimal points of the multiplicand and the multiplier.
- When we divide a decimal number by 10, 100, 1000, etc., the decimal point is shifted to the left by 1, 2 and 3 places, respectively.
- When a decimal number is divided by a whole number, as soon as the tenths digit is brought down from the dividend, a decimal point is placed in the quotient.

Alerts! Tips for warning of commonly made mistakes

ALERT!

- If speed is expressed in m/s, distance is expressed in metre and time is expressed in seconds.
- If speed is in km/h, distance is expressed in kilometres and time is expressed in hours.

Maths Fact contain interesting facts related to mathematics

MATHS FACT

- A rate of 10 per 1000 is the same as 1%.
- 50% discount is the same as half price.
- 100% of 100 is 100.
- Arithmetic is the science of numbers and the word arithmetic is derived from the Greek word 'arithmos' meaning 'numbers'.

Challenge! to go beyond average learning expectations

CHALLENGE

Find the average height of 10 boys, whose heights are given below:

4 feet 7 inches	4 feet 3 inches	4 feet 9 inches	5 feet	4 feet 8 inches
4 feet 4 inches	5 feet 1 inch	4 feet 7 inches	4 feet 4 inches	4 feet 3 inches

(Hint: 1 foot = 12 inches)

MULTIPLE CHOICE QUESTIONS

Try and guess the average without calculating.

1. Average of 15 L, 18 L, 16 L, 19 L and 17 L is:
 (a) 17 L (b) 18 L (c) 15.5 L (d) 17.5 L

2. Average of 25 m, 30 m, 35 m, 40 m and 45 m is:
 (a) 35 m (b) 30 m (c) 35.5 m (d) 42 m

3. Average of 310, 370, 340 and 400 is:
 (a) 370 (b) 355 (c) 315 (d) 350

Multiple Choice Questions wherever relevant and applicable