

| | | | | | |
|--------|---------------------|---|----------|-------------------------------------|-------------------------|
| PD-001 | Concise Mathematics | 1 | Integers | Introduction, Multiplication of | Exercise 1A Q.No. 5 |
| PD-002 | Concise Mathematics | 1 | Integers | Properties of Multiplication of | Exercise 1A Q.No. 3 |
| PD-003 | Concise Mathematics | 1 | Integers | Problem solving based on the above | Exercise 1A Q.No. 10 |
| PD-004 | Concise Mathematics | 1 | Integers | Division of Integers, Properties of | Exercise 1 B Q.No.2 |
| PD-005 | Concise Mathematics | 1 | Integers | Problem solving based on the above | Exercise 1 B Q.No.4 |
| PD-006 | Concise Mathematics | 1 | Integers | Removal of Brackets | Exercise 1C Q.No. 1, 2 |
| PD-007 | Concise Mathematics | 1 | Integers | Problem solving based on the above | Exercise 1C Q.No. 3 & 4 |
| PD-008 | Concise Mathematics | 1 | Integers | Recapitulation of the chapter | Chapter 1 |



ODM Teachers' Note

| | | | | | |
|--------------|-----|----------------|-------------|-------------|--|
| Class | VII | Subject | Mathematics | Plan | |
|--------------|-----|----------------|-------------|-------------|--|

| | | | |
|---------------|---|------------------|----------|
| Period | 1 | Chapter:1 | Integers |
|---------------|---|------------------|----------|

| | |
|---------------------------------|---|
| Sub-Concept | Introduction , Multiplication of Integers |
| Teaching Aids to be used | Audio-Visual Aids with CCRE |

| | |
|------------------|---|
| Learning outcome | <ul style="list-style-type: none"> Students will be able to multiply integers with different signs. Multiply integers with the same sign. Multiply an integer by -1. |
| | |

| SLNO | Step Wise (What to be done) |
|-----------------|---|
| 1. Introduction | <p>What are integers? List out the uses of integers in real life. Where do positive integers lie on the number line? Where do negative integers lie on the number line? Is zero an integer?</p> |
| | <p>Video Application of integers in real life https://www.youtube.com/watch?v=oj5lZBbzVck (6:11 minutes)</p> |
| 2.Presentation | <p>Multiplication of integers The product of two integers of the same sign is always positive. $30 \times 2 = ?$ $-30 \times (-2) = ?$</p> |
| | <p>The product of one positive and one negative integer is always negative. $-30 \times 2 = ?$</p> |
| | <p>How to find product of more than two integers? For example $3 \times (-4) \times (-5) = ?$ $(-3) \times (-4) \times (5) = ?$</p> |
| | <p>Tips to follow : If number of -ve integers is even : Product is +ve If number of - integers is odd : Product is -ve</p> |
| | <p>NOTE - Do not confuse with rules of addition and subtraction with multiplication</p> |
| 3.Evaluation | <p>Ex. 1A Q. No. 4 , 6 , 10 Ex 1D Q.No. 1 , 2, 3, 4 , 5 , 6</p> |
| 4.HW | <p>Exercise 1A Q No. 5 and AHA as follows</p> |
| AQ | <p>Evaluate : i) $(-18) \times (-2) \times (-5)$ ii) $(-7) \times (-8) \times 4 \times (-9)$</p> |

| | |
|--|--|
| | |
|--|--|

**CCRE- common class room equipment

**AHA- Additional Home Assignments (to be given to toppers)



ODM Teachers' Note

| | | | | | |
|---------------------------------|-----|------------------|---|-------------|--|
| Class | VII | Subject | Mathematics | Plan | |
| Period | 2 | Chapter:1 | Integers | | |
| Sub-Concept | | | Properties of Multiplication of Integers | | |
| Teaching Aids to be used | | | Audio-Visual Aids with CCRE | | |
| Learning outcomes | | | Students will be able <ul style="list-style-type: none"> • To calculate multiplication involving bigger integers. • To simplify problems using the properties of integers quickly | | |

| SL. NO | Step Wise (What to be done) |
|-----------------------|---|
| 1.Introduction | Rules of multiplication of integers What is the product of $8 \times 53 \times (-125)$? |
| Presentation | Video on properties of integers https://www.youtube.com/watch?v=ihg3y2jb3Yk (2min) |
| Evaluation | Ex 1A Q.No 1 , 2 Ex 1D Q.No. 7, 8 |
| 4.HW | Exercise 1A Q.No. 3 and AHA |
| AHA | i) $25 \times (-42) + (-42) \times (-35)$ ii) $25 \times (-76) \times 4$ iii) $(-33) \times 102 + (-33) \times (-2)$ |

**CCRE- common class room equipment

****AHA- Additional Home Assignments (to be given to toppers)**



ODM Teachers' Note

| | | | | | |
|--------------|-----|----------------|-------------|-------------|--|
| Class | VII | Subject | Mathematics | Plan | |
|--------------|-----|----------------|-------------|-------------|--|

| | | | |
|---------------|---|------------------|----------|
| Period | 3 | Chapter:1 | Integers |
|---------------|---|------------------|----------|

| | |
|---------------------------------|--|
| Sub-Concept | Problem solving based on the above concept |
| Teaching Aids to be used | Audio-Visual Aids with CCRE |

| | |
|--------------------------|--|
| Learning outcomes | <p>Students will be able</p> <ul style="list-style-type: none"> To calculate multiplication involving bigger integers. to simplify a series of arithmetic operations on integers quickly real life |
|--------------------------|--|

| SLNO | Step Wise (What to be done) |
|-----------------------|---|
| 1.Introduction | Properties of multiplication of integers |
| 2.Presentation | Ex 1A Q.No. 7, 8, 9 Ex 1D Q.No. 12,15 |
| 3.HW | EX1A Q.No.10 and AHA |
| AHA | <p>Evaluate :</p> <p>i) $-312 \times (-93) + 312 \times 7$</p> <p>ii) $(-60) \times 17 + 60 \times (-13)$</p> |

****CCRE- common class room equipment**

****AHA- Additional Home Assignments (to be given to toppers)**

ODM Teachers' Note

| | | | | | |
|---------------------------------|--|------------------|-------------|-----------------|---------|
| Class | VII | Subject | Mathematics | Plan for | Toppers |
| Period | 4 | Chapter:1 | Integers | | |
| Sub-Concept | Division of Integers | | | | |
| Teaching Aids to be used | Audio-Visual Aids with CCRE | | | | |
| Learning outcomes | <p>Students will be able to</p> <ul style="list-style-type: none"> • divide integers with the same sign • divide integers with different signs • solve problems involving arithmetic (+, -, x, ÷) operations | | | | |
| SLNO | Step Wise (What to be done) | | | | |
| 1.Introduction | $-6 \div 3 = ?$ $(-6) \div (-3) = ?$ | | | | |
| | Division is an inverse of process of multiplication. | | | | |
| 2.Presentation | <p>Video on division of integers https://www.youtube.com/watch?v=0-tksHOvW40 (7:14 minutes) Division of an integer by an integer of same sign is always positive.</p> | | | | |
| | Division of an integer by an integer of opposite sign is always negative. | | | | |
| | <p>Note 1 : In a division,</p> <ul style="list-style-type: none"> • the number to be divided is called dividend • the number which divides is called divisor • the result of division is called quotient | | | | |
| | <p>Note 2: Dividend ÷ divisor = quotient</p> <ul style="list-style-type: none"> • if a dividend is positive and divisor is negative , the | | | | |

| | |
|---------------------|---|
| | <p>quotient is negative</p> <ul style="list-style-type: none"> • if dividend is negative and divisor is positive, the quotient is negative • if dividend and divisor both are positive or both are negative, the quotient is positive |
| 3.Evaluation | Evaluation Question Ex. 1.B Q. No. 1 , 3 |
| 4.HW | HW- Ex. 1B Q. No 2 and AHA |
| 5.AQ | <p>Evaluate</p> <p>i) $(-1855) \div 53$</p> <p>ii) $523 \div 0$</p> |

**CCRE- common class room equipment

**AHA- Additional Home Assignments (to be given to toppers)



ODM Teachers' Note

| | | | | | |
|--------------|-----|----------------|-------------|-------------|--|
| Class | VII | Subject | Mathematics | Plan | |
|--------------|-----|----------------|-------------|-------------|--|

| | | | |
|---------------|---|------------------|----------|
| Period | 5 | Chapter:1 | Integers |
|---------------|---|------------------|----------|

| | |
|---------------------------------|--|
| Sub-Concept | Problem solving based on the above concept |
| Teaching Aids to be used | Audio-Visual Aids with CCRE |

| | |
|-------------------------|--|
| Learning outcome | <p>Students will be able to</p> <ul style="list-style-type: none"> • divide integers with the same sign • divide integers with different signs • evaluate problems involving arithmetic (+, -, x, ÷) operations |
|-------------------------|--|

| | |
|--|--|
| | |
|--|--|

| SLNO | Step Wise (What to be done) |
|----------------|--|
| 1.Introduction | Properties of division of integers |
| 2.Presentation | Quick recapitulation of properties of division of integers |
| 3.Evaluation | Ex1B Q.No. 5, 6 Ex 1 D Q.No. 9 & 10 |
| 4.HW | HW- Exercise 1 B Q.No.4 and AHA |
| 5.AQ | $\{36 \div (-9)\} \div \{(-24) \div 6\}$ |
| | $ -17 + 17 \div -25 - 42 $ |

**CCRE- common class room equipment

**AHA- Additional Home Assignments (to be given to toppers)



ODM Teachers' Note

| | | | | | |
|-------|-----|---------|-------------|----------|---------|
| Class | VII | Subject | Mathematics | Plan for | Toppers |
|-------|-----|---------|-------------|----------|---------|

| | | | |
|--------|---|---------|----------|
| Period | 6 | Chapter | Integers |
|--------|---|---------|----------|

| | |
|--------------------------|--|
| Sub-Concept | Removal of Brackets (problems on simplification involving brackets) |
| Teaching Aids to be used | Audio-Visual Aids with CCRE |

| | |
|-------------------|---|
| Learning outcomes | ➤ Students will be able to simplify and answer a series of operations on integers quickly. |
|-------------------|---|

| SLNO | Step Wise (What to be done) |
|----------------|-----------------------------|
| 1.Introduction | What does "DMAS " mean ? |

| | |
|-----------------------|---|
| | |
| 2.Presentation | Video on removal of brackets https://www.youtube.com/watch?v=HTD0ntJI98k |
| 3.Evaluation | Ex 1C Q. 3, 4, 5 ,6 Ex 1 D Q.11 |
| 4.HW | Exercise 1C Q.No. 1, 2 and AHA |
| 5.AQ | $4 + (1/5) \{ \{-10 \times (25 - 13 - 3) \} \div (-5) \}$ |
| | $[29 - (-2) \{6 - (7 - 3)\}] \div [3 \times \{5 + (-3) \times (-2)\}]$ |

**CCRE- common class room equipment

**AHA- Additional Home Assignments (to be given to toppers)



| | | | | | |
|--------------|-----|----------------|-------------|-----------------|---------|
| Class | VII | Subject | Mathematics | Plan for | Toppers |
|--------------|-----|----------------|-------------|-----------------|---------|

| | | | |
|---------------|---|----------------|----------|
| Period | 7 | Chapter | Integers |
|---------------|---|----------------|----------|

| | |
|---------------------------------|--------------------------------------|
| Sub-Concept | Problem solving on the above concept |
| Teaching Aids to be used | Audio-Visual Aids with CCRE |

| | |
|--------------------------|---|
| Learning outcomes | <ul style="list-style-type: none"> Students will be able to simplify and answer a series of operations on integers quickly. |
|--------------------------|---|

| | |
|--|--|
| | |
|--|--|

| SLNO | Step Wise (What to be done) |
|----------------|---|
| 1.Introduction | Rules to be followed for removal of brackets. |
| 2.Presentation | Ex 1 C Q.No. 7 , 8, 9 ,10 , 11, 12 ,13 |
| 3.Evaluation | Ex 1 C Q.No. 7 , 8, 9 10 , 11, 12 ,13 |
| 4.HW | HW Exercise 1C Q.No. 3 & 4 and AHA |
| 5.AQ | $23 - [23 - \{23 - (23 - 23 - 23)\}]$ |
| | $2550 - [510 - \{270 - (90 - 80 + 70)\}]$ |

**CCRE- common class room equipment

**AHA- Additional Home Assignments (to be given to toppers)



| | | | | | |
|-------|-----|---------|-------------|----------|---------|
| Class | VII | Subject | Mathematics | Plan for | Toppers |
|-------|-----|---------|-------------|----------|---------|

| | | | |
|--------|---|---------|----------|
| Period | 8 | Chapter | Integers |
|--------|---|---------|----------|

| | |
|--------------------------|------------------------------------|
| Sub-Concept | Recapitulation |
| Teaching Aids to be used | Audio-Visual Aids with CCRE |

| | |
|-------------------|---|
| Learning outcomes | <p>Students will be able to</p> <ul style="list-style-type: none"> • Multiply integers with the same sign. • Multiply an integer by -1. • Calculate multiplication involving bigger integers. • Simplify a series of arithmetic operations involving \times , $+$, $-$ on |
|-------------------|---|

| | |
|--|---|
| | <p>integers quickly</p> <ul style="list-style-type: none"> • Divide integers with the same sign • Evaluate problems involving arithmetic (+, -, x, ÷) operations • Simplify and answer a series of operations on integers quickly |
|--|---|

| SLNO | Step Wise (What to be done) |
|-----------------------|--|
| 1.Introduction | Educator will recapitulate the concept of integers with the help of an activity. |
| 2.Presentation | <p>Topic: Rolling for zero (Game) Materials required :</p> <p>i) A number line on a chart paper.</p> |
| | ii) Two markers of different colors (one for each player) |
| | ii) Two cubes : one cube called operation cube, labelled +, +, -, -, W, W; other cube called number cube, labelled 1, 2, 3, 4, 5, W. |
| | <p>Directions :</p> <ul style="list-style-type: none"> • Both players place their markers on 0 on the number line. • First player rolls both the cubes simultaneously and moves his or her marker on the number line as indicated by the two cubes .(For example : - 4 means move 4 spaces in the negative direction .) • If a 'W' is rolled on the number cube, it is wild and the player can choose any number from 1 to 5. • If a 'W' appears on the operation cube, the player can choose – or +. • Players take their turns alternately • The player who returns to zero first is the winner. |
| 4.HW | Chapter 1 |

**CCRE- common class room equipment

**AHA- Additional Home Assignments (to be given to toppers)