



Syllabus Breakdown

MATHEMATICS GRADE 6
AIR FOUNDATION SCHOOL SYSTEM

ISLAMABAD | PAKISTAN



Teaching weeks per annum

For the regions where academic session begins in **April**

FIRST TERM: APRIL – SEPTEMBER

Expected Teaching Weeks

April	Teaching Week 1	Teaching Week 2	Teaching Week 3	Teaching Week 4
May	Teaching Week 5	Teaching Week 6	Teaching Week 7	First Midterm Examination
June	<i>Summer Vacation</i>	<i>Summer Vacation</i>	<i>Summer Vacation</i>	<i>Summer Vacation</i>
July	<i>Summer Vacation</i>	<i>Summer Vacation</i>	<i>Summer Vacation</i>	<i>Summer Vacation</i>
August	Teaching Week 8	Teaching Week 9	Teaching Week 10	Teaching Week 11
September	Teaching Week 12	Teaching Week 13	Midterm Examination	Mid Term Examination

SECOND TERM: OCTOBER – MARCH

Expected Teaching Weeks

October	Teaching Week 14	Teaching Week 15	Teaching Week 16	Teaching Week 17
November	Teaching Week 18	Teaching Week 19	Teaching Week 20	Teaching Week 21
December	Teaching Week 22	Second Midterm Examination	<i>Winter Vacation</i>	<i>Winter Vacation</i>
January	Teaching Week 23	Teaching Week 24	Teaching Week 25	Teaching Week 26
February	Teaching Week 27	Teaching Week 28	Teaching Week 29	Teaching Week 30
March	<i>Revision Work</i>	Annual Examination	Annual Examination	<i>PTM & Annual Day</i>



Teaching weeks per annum

For the regions where academic session begins in **August**

FIRST TERM: AUGUST – DECEMBER

Expected Teaching Weeks

August	Teaching Week 1	Teaching Week 2	Teaching Week 3	Teaching Week 4
September	Teaching Week 5	Teaching Week 6	Teaching Week 7	First Midterm Examination
October	Teaching Week 8	Teaching Week 9	Teaching Week 10	Teaching Week 11
November	Teaching Week 12	Teaching Week 13	Teaching Week 14	Teaching Week 15
December	Midterm Examination	Midterm Examination	<i>Winter Vacation</i>	<i>Winter Vacation</i>

SECOND TERM: OCTOBER – MARCH

Expected Teaching Weeks

January	Teaching Week 16	Teaching Week 17	Teaching Week 18	Teaching Week 19
February	Teaching Week 20	Teaching Week 21	Teaching Week 22	Second Midterm Exam
March	Teaching Week 23	Teaching Week 24	Teaching Week 25	Teaching Week 26
April	Teaching Week 27	Teaching Week 28	Teaching Week 29	Teaching Week 30
May	<i>Revision Work</i>	Annual Examination	Annual Examination	<i>PTM & Annual Day</i>



Allocation of periods

Subjects and period distribution for preparing timetable, syllabus breakdown, lesson plans etc.

SN	SUBJECT	JUNIOR			PRIMARY		SECONDARY			EACH SUBJECT PER ANNUM
		GRADE – 1	GRADE – 2	GRADE – 3	GRADE – 4	GRADE – 5	GRADE – 6	GRADE – 7	GRADE – 8	
1	English Language	5	5	5	5	5	5	5	5	150
2	Urdu Language	5	5	5	5	5	5	5	5	
3	Mathematics	5	5	5	5	5	5	5	5	
4	Science	-	-	-	5	5	5	5	5	
5	General Knowledge	5	5	5	-	-	-	-	-	
6	Sindhi Language ¹	4	4	4	4	4	4	4	4	120
7	Social Studies	-	-	-	4	4	-	-	-	
8	Islamiyat	4	4	4	4	4	4	4	4	
9	Nazra-e-Quran ²	4	4	4	4	4	4	4	4	
10	Geography	-	-	-	-	-	3	3	3	
11	Computer Science	3 SRM ³	3 SRM	3 SRM	3 SRM	3 SRM	3	3	3	90
12	Life Skills	3 SRM	3 SRM	3 SRM	-	-	-	-	-	
13	Artwork	3 SRM	3 SRM	3 SRM	-	-	-	-	-	
14	History	-	-	-	-	-	2	2	2	60
15	Life Skills & Art	-	-	-	2 SRM	2 SRM	-	-	-	
		-	-	-	-	-	1 SRM	1 SRM	1 SRM	30
PERIODS PER WEEK		37	37	37	37	37	37	37	37	

¹ In Sindh Region only

² In all regions except Sindh

³ SRM: (Supplementary Reading Material)



WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
1 /30	1.	Unit: 1, Introduction To Sets Sets Page: 5-6		
	2.	Unit: 1, Introduction To Sets Sets Page: 5-6		
	3.	EXERCISE 1A, Q 1 to 4 (understanding and Solution) Page : 6	Knjbbjn bhb	
	4.	Set Notation (descriptive , tabular and Set builder Notation) page: 6- 7		
	5.	EXERCISE 1B: (Q 1 to 3) page: 8		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
2 /30	6.	Universal Set , Venn Diagrams page: 8-9		
	7.	EXERCISE 1C: (Q 1 to 3) page: 10		
	8.	Types of Sets: Finite and Infinite Set, Unit/ Singleton Set and Empty set. EXERCISE 1D: Q 1 to 3. page: 10-11		
	9.	Types of Sets: Finite and Infinite Set, Unit/Singleton Set and Empty set. EXERCISE 1D: Q 1 to 3. page: 10-11		
	10.	EXERCISE 1D: Q 4 to 5. page: 11-12		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
3 /30	11.	Cardinality of A Set, Symbols used in sets Multiple Choice Questions 1 page: 12-13		
	12.	REVISION 1: PAGE: 14-15		
	13.	Unit 2: INTEGERS (Natural numbers, Whole numbers, Some rules for Natural and Whole numbers, Properties of 0 and 1) PAGE: 18 to 21		
	14.	Rules for Operating on natural numbers and whole numbers. Properties of Addition, Subtraction and Multiplication. EXERCISE 2A: Q1(I to vi) page: 21 to 23, 26		
	15.	Rules for Operating on natural numbers and whole numbers Properties of Multiplication and Division EXERCISE 2A: Q1(vii to xiv) and Q 2: page: 23-26		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
4 /30	16.	EXERCISE 2A: Q 3 and Q 4: Page: 26		
	17.	Integers, The Set of Integers, Integers on a number line Example 1 to5: Page: 27 to 30		
	18.	EXERCISE 2B: Q 1 to 6. Page: 30		
	19.	Absolute or numerical value of an integer. Rules for operating on Integers(Addition and subtraction of integers, Examples 6 to 8) Properties of addition of integers Page: 31-35		
	20.	Multiplication of integers of integers (Examples 9 and 10) Rules and Properties of multiplication of integers Page: 35-38		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
5 /30	21.	Division of integers (Examples 11 and 12) Rules and Properties of division of integers (Examples 13 and 14) EXERCISE 2C: Q 1 to 4. Page: 39-41		
	22.	EXERCISE 2C: Q 5 to 12 Page: 41		
	23.	EXERCISE 2C: Q 13 to 17 Page: 41		
	24.	BODMAS rule and Simplification of integers using order of mathematical operations: Examples 15 to 20: Page: 42-45		
	25.	EXERCISE 2D: Q 1 Page: 48		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
6 /30	26.	Perfect Squares and Testing a perfect Square Page: 46-48		
	27.	EXERCISE 2D: Q 2 to 5 Page: 48		
	28.	Multiple Choice Question 2 Page: 48-50		
	29.	Unit 3: Factors and Multiples Prime numbers , Dividend, Factors, (Example 1 to 3) Page: 54-57		
	30.	Tests of Divisibility , Multiples Example 4 to 7 page: 58 -60		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
7 /30	31.	EXERCISE 3A: Q 1 to 5 Page: 60		
	32.	EXERCISE 3A: Q 6 to 9 Page: 60		
	33.	EXERCISE 3A: Q 10 to 12 Page: 61		
	34.	Prime and Composite Numbers , Even and Odd Numbers Page: 61-62 Sieve of Eratosthenes, Twin and Triplet Prime EXERCISE 3B: Q 1 to 4 Page: 63-64		
	35.	EXERCISE 3B: Q 5 to 8 Page: 64		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
8 /30	36.	EXERCISE 3B: Q 9 to 10 and Multiple-Choice Questions 3 Page: 64-65		
	37.	Unit 4: Factorization: HCF AND LCM Prime and Composite Factorization Page: 68 to 70		
	38.	EXERCISE 4A: Q 1 Page: 76		
	39.	EXERCISE 4A: Q 2 & 3 Page: 76		
	40.	Highest Common Factor (HCF) HCF by Prime Factorization Method. (Example: 2 & 3) Page: 71-72 EXERCISE 4A: Q 4 Page: 76		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
9 /30	41.	HCF by Division Method. (Example: 2 & 3) Page: 73-75 EXERCISE 4A: Q 5 Page: 76		
	42.	EXERCISE 4A: Q 6 to 8 Page: 76		
	43.	Least Common Multiple (LCM), Properties of LCM Examples 8 to 10 Page:76-77 Exercise 4B: Q 1: Page:82		
	44.	LCM by Prime Factorization Method. (Example: 12 & 13) Page: 77-78 EXERCISE 4B: Q 2 Page:82		
	45.	LCM by Division Method. (Example: 13 to 17) Page: 79-81 EXERCISE 4B: Q 3 Page: 82		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
10/30	46.	Relation between HCF & LCM of two numbers (Example: 18 to 19) Page: 81 -82 EXERCISE 4B: Q 4 to 9 Page: 88		
	47.	EXERCISE 4B: Q 10 to 14 Multiple Choice Question 4: Page: 88		
	48.	Revision 2: Page: 85		
	49.	Unit 5: RATIO AND RATE Reviewing Fraction, Ration, Comparing ratios of common and different Terms Examples 1 to 4: Page: 88-90		
	50.	Expressing Ratio in Simplest Terms: Examples 5 to 13 Page : 91-94		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
11/30	51.	EXERCISE 5: Q 1 to 4 Page: 88		
	52.	Continued Ratio, Rate: Examples 14 to 16 EXERCISE 5: Q 5 to 9 Page: 94 to 97		
	53.	EXERCISE 5: Q 10 to 14 Page: 97		
	54.	EXERCISE 5: Q 15 to 20 Multiple Choice Question 5: Page: 98-99		
	55.	Unit 6: FINANCIAL ARITHMETIC PERCENTAGE Percentage and converting a fraction into percentage (Examples 1 to 4) EXERCISE 6A: Q 1 & 2 Page: 102 to 104, 107		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
12/30	56.	Converting a percentage into fraction (Examples 5 to 12) Page: 105 to 106		
	57.	EXERCISE 6A: Q 3 to 7 Page: 107		
	58.	EXERCISE 6A: Q 8 to 11 Page: 107		
	59.	Expressing one quantity as a percentage of another quantity: Example 13 & 14 Comparing two quantities by percentage (Example 15 & 16) EXERCISE 6B: Q 1 Page: 108-111		
	60.	Percentage increases or decreases of a measure: (Example 17 & 18) EXERCISE 6B: Q 2 & 3 Page: 110-111		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
13/30	61.	EXERCISE 6A: Q 4 to 7 Page: 111-112		
	62.	EXERCISE 6A: Q 8 to 10 Multiple Choice Question 5: Page: 112-113		
	63.	Unit 7: INTRODUCTION TO ALGEBRA Sentences and Statements, Variable, Algebraic Expressions, Coefficient, Like and Unlike Terms Page: 118-120		
	64.	EXERCISE 7A: Q 1 to 3 Page: 121-122		
	65.	EXERCISE 7A: Q 4 to 5 Page: 122		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
14/30	66.	Evaluation, Addition and Subtraction of Algebraic expressions Examples 1 to 7 Page: 122-126		
	67.	EXERCISE 7B: Q 1 to 5 Page: 126-127		
	68.	EXERCISE 7B: Q 6 to 9 Page: 127		
	69.	EXERCISE 7B: Q 10 to 14 Page: 127		
	70.	Simplification: (Example 8 to 10) page# 128 -129		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
15/30	71.	Number Sequence: (Examples 12 & 13) Page: 129-131		
	72.	EXERCISE 7B: Q 1 to 7 Page: 131		
	73.	EXERCISE 7B: Q 8 to 11 Page: 131-132		
	74.	EXERCISE 7B: Q 12 to 14 Page: 132		
	75.	EXERCISE 7B: Q 15 to 16 Multiple Choice Questions 7 Page: 132 -133		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
16/30	76.	UNIT 8: LINEAR EQUATIONS (Algebraic Equations, Linear Algebraic Equations Examples 1 to 4 Page: 136-140		
	77.	Create an equation from a statement (Examples 5 & 6) Page: 141-142		
	78.	Examples 7 to 9 Page: 142-143		
	79.	EXERCISE 8: Q 1 & 2 Page: 144		
	80.	EXERCISE 8: Q 3 to 11 Page: 144-145 MULTIPLE CHOICE QUESTIONS 8:		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
17/30	81.	REVISION 4: Page: 146		
	82.	REVISION 4: Page: 147		
	83.	UNIT 9: GEOMETRY LINES AND ANGLES Shapes and Lines, Points, Lines and Planes Page:150-153		
	84.	Ray, Straight Line, Three Dimensional Objects, Cuboid, Cube, cylinder Page:153-157		
	85.	EXERCISE 9A: Q 1 to 6 Page: 158-159		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
18/30	86.	EXERCISE 9A: Q 7 to 10 Page: 159		
	87.	Angles, Describing an angle, Types of an angles, pairs of angles, vertically opposite angles Page: 160-163		
	88.	EXERCISE 9B: Q 1 to 5 Page: 164		
	89.	EXERCISE 9B: Q 6 to 8 Page: 164		
	90.	EXERCISE 9B: Q 9 to 12 Page: 164-165		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
20/30	96.	MULTIPLE CHOICE QUESTION 9 Page:175-177		
	97.	UNIT 10: PRACTICAL GEOMETRY Construction of a line segment of a given length, Steps of construction, Using a pair of compasses EXERCISE 10A: Q 1 TO 4 Page: 182-183		
	98.	Constructing a perpendicular(Example 1 & 2) page:183-184		
	99.	Measurement and construction of angles, Bisecting an angle To construct an angle of 60 and 30 (Example 3 & 4) Page:185-186		
	100.	To construct an angle of 90, 45 and 120 (Example 5 to 7) Page:187-188		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
21/30	101.	To construct an angle of 75 and 105, Reflection Symmetry (Example 8 to 11) Page:189-191		
	102.	EXERCISE 10B: Q 1 to 3 Page: 192		
	103.	EXERCISE 10B: Q 4 to 6 Page: 192		
	104.	EXERCISE 10B: Q 7 to 8 Page: 193		
	105.	EXERCISE 10B: Q 9 to 11 MULTIPLE CHOICE QUESTION 10 Page: 193-194		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
22/30	106.	UNIT 11: TRIANGLES Triangle, Types of triangles Page: 198-199		
	107.	EXERCISE 11A: Q 1 to 3 Page: 199		
	108.	EXERCISE 11A: Q 4 to 6 Page: 199-200		
	109.	Interior and Exterior angles of a triangle(Example 1 to 3) Page: 200-202		
	110.	Relation between exterior and opposite exterior angle, Properties of Isosceles triangle (Example 4 to 7) Page: 202-205		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
23/30	111.	EXERCISE 11A: Q 1 to 4 Page: 205		
	112.	EXERCISE 11A: Q 5 to 9 Page: 205-206		
	113.	EXERCISE 11A: Q 10 to 13 MULTIPLE CHOICE QUESTION 11 Page: 206-207		
	114.	UNIT 12: PERIMETER AND AREA Perimeter, Perimeter of Quadrilateral, Perimeter of Square, Perimeter of Rectangle, Perimeter of Parallelogram, Perimeter of Triangle (Example 1) Page: 210-211		
	115.	Area, Measuring of area of squared paper page: 212-214		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
24/30	116.	EXERCISE 12A: Q 1 to 2 Page: 214		
	117.	Measurement of Area using formula(Examples 1 to 3) Page: 215-216		
	118.	(Examples 4 & 5) EXERCISE 12B: Q 1 & 2 Page: 216-217		
	119.	EXERCISE 12B: Q 3 & 4 Page: 218		
	120.	EXERCISE 12B: Q 5 to 9 Page: 218		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
25/30	121.	EXERCISE 12B: Q 10 to 13 Page: 218		
	122.	EXERCISE 12B: Q 14 to 16 Page: 219		
	123.	Areas of borders (Example 6 to 8) Page: 219-220		
	124.	Areas of geometrical figures (Example 9 to 11) Page: 221-222		
	125.	Areas of trapezium (Example 12) EXERCISE 12C: Q 1 to 3 Page: 223-224		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
26/30	126.	EXERCISE 12C: Q 4 to 5 Page: 224		
	127.	EXERCISE 12C: Q 6 & 7 MULTIPLE CHOICE QUESTION 12 Page: 224-226		
	128.	UNIT 13: VOLUME AND SURFACE AREA Volume, Units of measurement of volume, Volume of cube(Example 1 & 2) Page: 230-232		
	129.	Volume of cuboid(Example 3 to 7) Page: 232-234		
	130.	Volume of cuboid(Example 8 to 12) Page: 234-236		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
27/30	131.	Surface Area, Surface area of a cuboid and cube, Units of measurement, (Example 13 to 16) Page: 237-240		
	132.	EXERCISE 13: Q 1 to 4 Page: 241		
	133.	EXERCISE 13: Q 6 to 8 Page: 241		
	134.	EXERCISE 13: Q 9 to 12 MULTIPLE CHOICE QUESTION Page: 241-242		
	135.	REVISION 5 Page: 244		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
28/30	136.	REVISION 5 Page: 245		
	137.	UNIT 14: DATA HANDLING Measures of central tendency(Mean, Median) (Examples 1 to 6) Page: 248-250		
	138.	Measures of central tendency(Mode) (Examples 4 to 6) Page: 250		
	139.	EXERCISE 14A: Q 1 to 3 Page: 251		
	140.	EXERCISE 14A: Q 4 to 7 Page: 251-252		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
29/30	141.	Numerical Data, Types of Data, Pictorial presentation of numerical data, Pictograph, Line graph, Bar graph, Page: 252-255		
	142.	Horizontal bar graph, Vertical bar graph, (Examples 7) Page: 255-258		
	143.	Multiple bar graph, Pie Chart Page: 259-261		
	144.	Introduction to probability, Sample space, Equally likely and not equally likely outcomes Page: 262-263		
	145.	EXERCISE 14B: Q 1 to 3 Page: 264		

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WEEK	[150]	UNIT & TOPIC CONTENT INCLUDING PAGE NUMBER	SIGN CR/CT	DATE
30/30	146.	EXERCISE 14B: Q 4 to 5 Page: 265		
	147.	EXERCISE 14B: Q 6 to 8 Page: 266		
	148.	EXERCISE 14B: Q 9 to 11 Page: 267		
	149.	EXERCISE 14B: Q 12 to 14 MULTIPLE CHOICE QUESTION Page: 267-269		
	150.	TEST PAPER Page: 272-273		

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