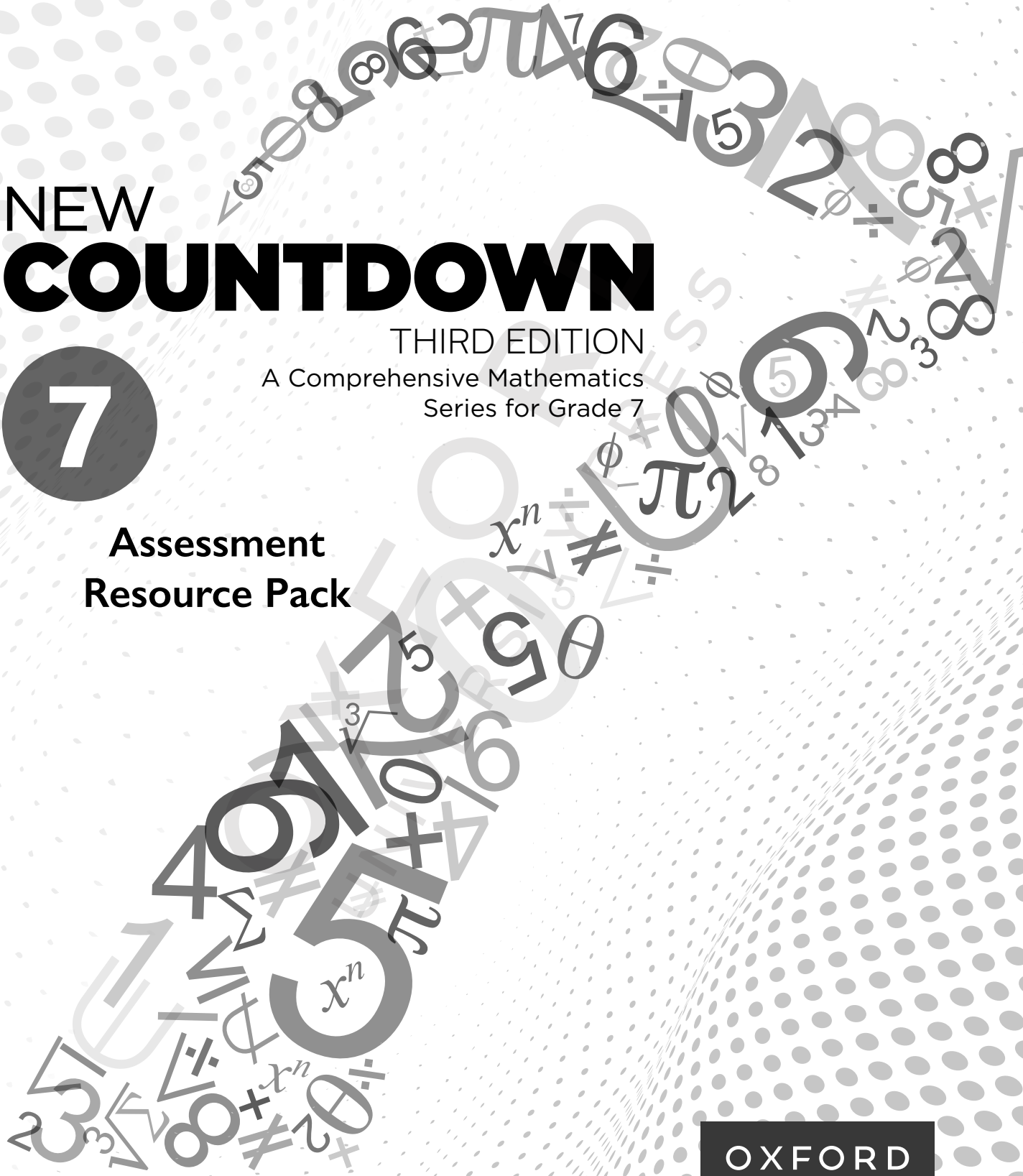
NEW COUNTDOWN

THIRD EDITION

A Comprehensive Mathematics Series for Grade 7

7

Assessment Resource Pack



OXFORD UNIVERSITY PRESS

Preface

Assessments are an appropriate way for teachers to assess the extent to which the students have grasped the learning objectives and their ability to apply their learned concepts. An effective assessment is based on the curriculum's expectations of a student's learning achievements at every level, as well as provides an evaluation of the process of judgments and the interpretations of the questions by the students when attempting the assessment itself. For an assessment to reach its full purpose, the teacher must also provide descriptive feedback upon return that helps guide the students towards improvement.

The **Assessment Resource Pack** therefore, helps direct the teachers on how to effectively make use of assessments in their classrooms. This resource pack comes with five model papers – two midyear, and three final papers – that serve as an appropriate example for students to know what to expect in an examination, and for teachers in guiding them on how to make assessment papers that test a student's knowledge, application, and reasoning. The multiple choice questions (MCQ) is a form of objective assessments and can be used to test a wide range of thinking skills focusing on content. They offer students an opportunity to reveal knowledge, skills, and abilities in a variety of ways. Short questions (SQ) generally require exact answers in a short time. Students are more familiar with this practice and they provide a better chances at scoring. Constructive response questions (CRQ) require more elaborate answers with explanation and reasoning. They demand students to create their own responses based on their understanding and prior knowledge. The Unit Weightage Grid also helps teachers balance the paper amongst these three to evaluate several learning objectives within one assessment.

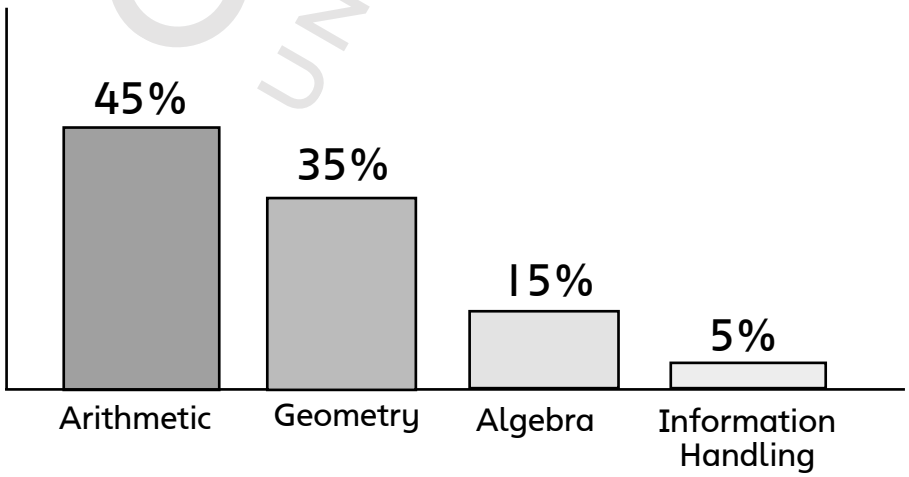
It is important to consider that summative assessments – i.e. term and final examinations – are not the only important kind of assessment in an academic setting. Formative assessments, such as class tests, worksheets, homework, and quizzes, are all of equal importance as they refer to the ongoing process the teacher and students engage in as they focus on common learning goals and work towards achieving them. Informal evaluations such as class discussions, group assignments, and activities all help further enhance the understanding of their learning objectives in different ways, thus challenging them to approach and decipher the same concepts from different angles.

All forms of assessment help the teachers diagnose the process and achievement of the students, and evaluate their ability to grasp and apply concepts in more than one way. The students also benefit from the different kinds of assessment as each kind offers the student more feedback that will eventually guide him or her towards successfully arriving at the learning objective.

Contents

Unit-wise Weightage Grid – Grade VII

Unit	Title	Weightage
1.	Sets	7%
2.	Rational Numbers	7%
3.	Decimals	7%
4.	Exponents	7%
5.	Square Roots of Positive Numbers	6%
6.	Direct and Inverse Variation	6%
7.	Financial Arithmetic	5%
8.	Algebraic Expressions	10%
9.	Linear Equations	5%
10.	Fundamentals of Geometry	12%
11.	Practical Geometry	15%
12.	Circumference, Area and Volume	8%
13.	Information Handling	5%
	Total	100%



Syllabus Coverage Grid

KEY: MCQs ✹ SQs ■ CRQs ▲

Unit	SLOs (Learning Outcomes/Skills)	Mid-Year 1	Mid-Year 2	Annual 1	Annual 2	Annual 3
Sets	**1.1 Sets**					
	• set builder form					
	• tabular form.					
	1.2 Operations on Sets					
	i) Union, intersection and difference of two sets.					
	ii) Find					
	• union of two or more sets,					
	• difference of two sets					
	iii) Identify disjoint and overlapping sets.					
	iv) Universal set and complement of a set.					
	v) Verify different properties involving union of sets, intersection of sets, difference of sets, and complement of a set.					
	1.3 Venn Diagram					
	i) Represent sets through Venn diagram.					
	ii) Perform operations of union, intersection, difference					
	iii) Complement on two sets A and B when					
	• A is subset of B,					
	• B is subset of A					
	• A and B are disjoint sets					
	• A and B are overlapping sets, through Venn diagram.					
Rational Numbers	**2.1 Rational Numbers**					
	i) Rational number as a number that can be expressed in the form p/q, where p and q are integers and q → O.					
	ii) Represent rational numbers on number l line.					
	2.2 Operations on Rational Numbers					
	i) Add two or more rational numbers.					
	ii) Subtract a rational number from another.					
	iii) Find additive inverse of a rational number.					
	iv) Multiply two or more rational numbers.					
	v) Divide a rational number by a non-zero rational number.					

	vi) Find multiplicative inverse of a rational number.					
	vii) Find multiplicative identity of a rational number.					
	viii) Find reciprocal of a rational number.					
	ix) Verify associative property of rational numbers with respect to addition and multiplication.					
	x) Verify distributive property of rational numbers with respect to multiplication over addition and subtraction.					
	xi) Compare two rational numbers.					
	xii) Arrange rational numbers in ascending or descending order.					
Decimals	**3.1 Conversion of Decimals to Rational Numbers**					
	Convert decimals to rational numbers.					
	Convert rational numbers to decimal numbers					
	3.2 Terminating and Non- terminating Decimals					
	i) Terminating decimals as decimals having a finite number of digits after the decimal point.					
	ii) Recurring decimals as non-terminating decimals in which a single digit or a block of digits repeats itself infinite number of times after decimal point.					
	iii) Use the following rule to find whether a given rational number is terminating or not.					
	Rule: If the denominator of a rational number in standard form has no prime factor other than 2, 5 or 2 and 5, then and only then the rational number is a terminating decimal.					
	iv) Express a given rational number as a decimal and indicate whether it is terminating or recurring.					
	Addition and subtraction of decimal numbers					
	Multiplication of decimal numbers					
	3.3 Approximate Value					
	Get an approximate value of a number, called rounding off, to a desired number of decimal places					
	Find percentage of a given number					
Exponents	**4.1 Exponents/Indices**					
	i) Identify base, exponent and value.					
	4.2 Laws of Exponents/Indices					
	ii) Use rational numbers to deduce laws of exponents					
	• **Product Law:**					
	when bases are same but exponents are different: $a^m \times a^n = a^{m+n}$					
	when bases are different but exponents are same: $a^m \times b^m = (ab)^m$					

	• **Quotient Law:**					
	$a^m \div a^n = a^{m-n}$, when bases are same but exponents are different:					
	$a^m \div b^m = (a/b)^m$, when bases are different but exponents are same.					
	• **Power law**: $(a^m)^n = a^{mn}$.					
	• **For zero exponent**: $a^0 = 1$.					
	• **For exponent as negative integer :** a^{-m}					
	iii) Demonstrate the concept of power of integer that is (-a)" when n is even or odd integer.					
	iv) Apply laws of exponents to evaluate expressions.					
Squares and Square roots	**5.1 Perfect Squares**					
	i) Identify a perfect square.					
	ii) Test whether a number is a perfect square or not.					
	iii) Identify and apply the following properties of perfect square of a number.					
	• The square of an even number is even.					
	• The square of an odd number is odd.					
	• The square of a proper fraction is less than itself.					
	The square of a decimal less than I is smaller than the decimal.					
	5.2 Square Roots					
	i) Square root of a natural number and its notation.					
	ii) Find square root, by division method and factorization method, of					
	• natural numbers					
	• fraction,					
	• decimal which are perfect squares.					
	iii) Solve real-life problems involving square roots.					
Direct and Inverse Variations	**6.1 Continued Ratio**					
	i) Continued ratio and recall direct and inverse, and proportion.					
	ii) Solve real-life problems (involving direct and inverse proportion) using unitary method and proportion method.					
	6.2 Time, Work and Distance					
	i) Solve real-life problems related to time and work using proportion.					
	ii) Solve real-life problems related to time and distance using proportion.					

	ii) Find relation (i.e. speed) between time and distance.					
	iii) Convert units of speed (kilometer per hour into meter per second and vice versa).					
	iv) Solve variation related problems involving time and distance.					
Financial Arithmetic	**7.1 Taxes**					
	i) Property tax and general sales tax.					
	ii) Solve tax-related problems.					
	7.2 Profit and Mark-up					
	i) Profit and mark-up.					
	ii) Find the rate of profit and mark-up per annum.					
	iii) Solve real-life problems involving profit and mark-up.					
	iv) Find net selling price.					
	v) Find discount and discount %, marked price.					
	vi) Find Simple interest, rate, and time.					
	vii) Profit and profit %					
	viii) Loss and loss %					
	7.3 Zakat and Ushr					
	i) Zakat and ushr.					
	ii) Solve problems related to zakat and ushr.					
Algebric Expressions	**8.1 Algebraic Expressions**					
	i) Constant as a symbol having a fixed numerical value.					
	ii) Variable as a quantity which can take various numerical values.					
	iii) Literal as an unknown number represented by an alphabet.					
	iv) Coefficient as a numeral factor of a variable.					
	v) Polynomial as an algebraic expression in which the powers of variables are all whole numbers.					
	vi) Degree of the expression					
	vii) Identify a monomial, a binomial and a trinomial as a polynomial having one term, two terms and three terms respectively.					
	viii) Like unlike terms					
	8.2 Operations with Polynomials					
	i) Add two or more polynomials.					

	ii) Subtract a polynomial from another polynomial.					
	iii) Find the product of					
	• monomial with monomial,					
	• monomial with binomial/trinomial,					
	• binomials with binomial/trinomial.					
	8.3 Algebraic Identities					
	Recognize and verify the algebraic identities:					
	• $(x + a)(x + b) = x^2 + (a + b)x + ab$,					
	• $(a + b)^2 = (a + b)(a + b) = a^2 + 2ab + b^2$					
	• $a^2 - b^2 = (a - b)(a + b)$.					
	· $(a - b)(a + b) = a^2 - b^2$					
	8.4 Factorisation of Algebraic Expressions					
	i) Factorise an algebraic expression (using algebraic identities).					
	ii) Factorise an algebraic expression (making groups).					
Linear Equations	**9.1 Linear Equation**					
	i) Linear equation in one variable.					
	9.2 Solution of Linear Equation					
	i) Demonstrate different techniques to solve linear equation.					
	ii) Solve linear equations of the type: • $ax + b = c$,					
	• $(ax + b)/(cx + d) = m/n$					
	iii) Solve real-life problems involving linear equations.					
Fundamentals of Geometry	**10.1 Properties of Angles**					
	i) Adjacent, complementary and supplementary angles.					
	ii) Vertically opposite angles.					
	iii) Calculate unknown angles involving adjacent angles, complementary angles, supplementary angles and vertically opposite angles.					
	iv) Calculate unknown angle of a triangle.					
	Draw an angle bisector					
	Draw an angle with a compass.					
	Construct a rectangle when one side and diagonal is given.					
	10.2 Congruent and Similar					
	i) Identify congruent and similar figures.					

	ii) Recognise the symbol of congruency.					
	iii) Apply the properties for two figures to be congruent or similar.					
	iv) Find the unknown sides in similar figures.					
	10.3 Congruent Triangles					
	Define frequency distribution (i.e. frequency, lower class limit, upper class limit, class interval) and range of a data					
	Determine the corresponding congruent sides of a triangle.					
	Apply following properties for congruency between two triangles.					
	SSS ≅ SSS					
	SAS ≅ SAS					
	ASA ≅ ASA					
	RHS ≅ RHS					
	10.4 Circle					
	i) Describe a circle and its centre, radius, diameter, chord, arc, major and minor arcs, semicircle and segment of the circle.					
	Find the area of a circle.					
	ii) Draw a semicircle and demonstrate the property; the angle in a semicircle is a right angle.					
	iii) Draw a segment of a circle and demonstrate the property; the angles in the same segment of a circle are equal.					
	Concentric circle have same centre.					
Practical Geometry	**11.1 Line Segment**					
	i) Divide a line segment into a given number of equal segments.					
	ii) Divide a line segment internally in a given ratio.					
	Draw a line, a line segment, and a ray.					
	Angles made by two parallel lines and a transversal					
	Find the unknown angles made by two parallel line and a transversal					
	Find unknown angles on a straight line and around a point.					
	11.2 Triangles					
	i) Construct a triangle when perimeter and ratio among the lengths of sides are given.					
	ii) Construct an equilateral triangle when					
	• base is given,					
	• altitude is given.					
	iii) Construct an isosceles triangle when					
	• base and a base angle are given,					

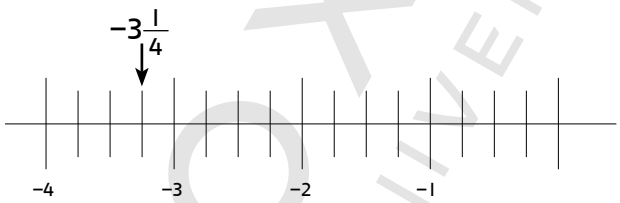
	• vertical angle and altitude are given,					
	• altitude and a base angle are given.					
	Calculate the unknown angle in a triangle.					
	Sum of the angles of a trapezium is 360°.					
	11.3 Parallelogram					
	i) Construct a parallelogram when.					
	• two adjacent sides and their included angle are given.					
	• two adjacent sides and a diagonal are given.					
	ii) Verify practically that the sum of					
	• measures of sum of the angles of a triangle is 180^0.					
	Identify altitude of a parallelogram.					
	Sum of the angles of a quadrilateral is 360^0.					
	Cube and cuboid					
	Dimensions of a cube and cuboid					
	Find surface area of a cube, one side of a cube when surface area is given					
	Find area of a square and unknown side.					
	Find area of a triangle, find height and base of a triangle.					
	Find area of a trapezium and its height.					
	Area of a rhombus and its application in real-life					
Circumference, Area, and Volume	**12.1 Circumference and Area of Circle**					
	i) Express pi as the ratio between the circumference and the diameter of a circle.					
	ii) Find the circumference of a circle using formula.					
	iii) Find the area of a circular region using formula.					
	iv) Find the circumference of a concentric circle .					
	v) Draw a circle with the given measurements.					
	Find area of a square and a rectangle.					
	Find one side of a square when area is given.					
	Find one side of a rectangle when area is given. Find the area of surrounded path.					
	12.2 Surface Area and Volume of Cylinder					
	i) Find the surface area of a cylinder using formula.					
	ii) Find the volume of a cylindrical region using formula.					
	Find the surface area of a cuboid.					
	iii) Solve real-life problems involving cylinders					

Frequency Distribution	**13.1 Frequency Distribution**					
	i) Demonstrate data presentation.					
	Define frequency distribution (i.e. frequency, lower class limit, upper class limit, class interval) and range of a data					
	Draw a bar graph.					
	Interpret and draw pie graph					
	Tally Charts					
	Drawing and interpret a bar graph					

✷ **The highlighted SLOs are not included in National Curriculum for grade VII but are covered in New Countdown Book 7.**

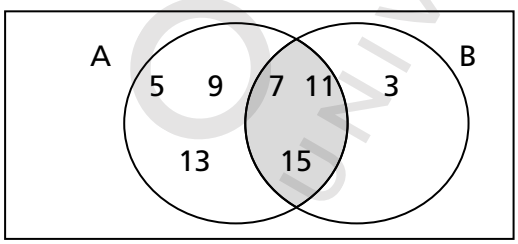
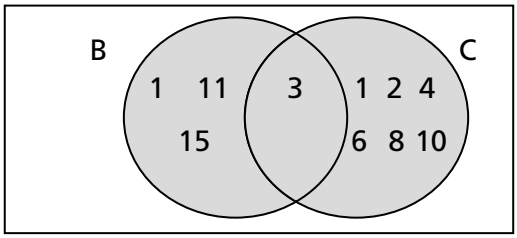
Marking Scheme
Model Paper I
Mid-Year Examination
Mathematics
Class VII

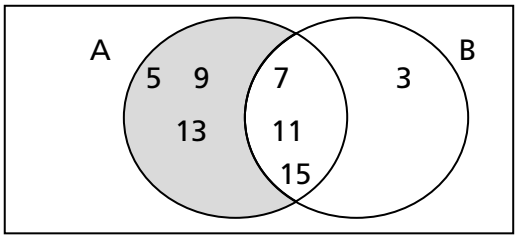
	Section A [Total Marks: 20]	Marking Criteria
Q1	I. C VI. D XI. B XVI. C II. C VII. B XII. C XVII. D III. C VIII. A XIII. A XVIII. B IV. B IX. A XIV. B XIX. A V. C X. C XV. B XX. B	1 mark for each correct answer
		[Total Marks: 20]

	Section B	Marking Criteria
Q2 a)	(i) $A - B = \{2, 4, 6\}$ (ii) $A \cap B = \{3, 5, 7\}$ (iii) $B \cup C = \{3, 5, 7, 8, 20, 30, 40\}$	1 mark for correct answer 1 mark for correct answer 1 mark for correct answer
b)	$U = P \cup P'$ $U = \{1, 2, 3, 4, 5, 6, 7, 9, 10\}$	1 mark for correct operation 1 mark for accuracy
		[Total Marks: 5]
Q3 a)		1 mark for appropriate number line 1 mark for identifying $-3\frac{1}{4}$ on number line
b)	$\frac{-18}{60}, -\frac{24}{60}, \frac{75}{60}, \frac{34}{60},$ $\frac{75}{60}, \frac{34}{60}, \frac{18}{60}, \frac{-24}{60},$ $\frac{-5}{-4}, \frac{17}{30}, \frac{6}{-15}, \frac{-3}{10},$	1 mark for same denominator 1 mark for correct ordering 1 mark for substituting with actual fractions
		[Total Marks: 5]

Q4 a)	$\frac{-16 \times 8}{125 \times 8} = -\frac{128}{1000} = -0.128$ Or: 16 ÷ 125 (long division) = −0.128	1 marks for either of the methods 1 mark for correct answer
b)	$\frac{58}{174000}$ $\frac{1}{3000}$	2 marks for removing the two decimals and simplification 1 mark for accuracy
		[Total Marks: 5]
Q5 a)	Long division method or prime factorization method. $\sqrt{1521} = 39$	2 marks for either of the methods 1 mark for correct answer
b)	$675 = \overline{3 \times 3} \times 3 \times \overline{5 \times 5}$ $675 \times ③ = \overline{3 \times 3} \times \overline{3 \times ③} \times \overline{5 \times 5}$ 3 is the required number.	1 mark for prime factorisation 1 mark for completing the square with the correct answer
		[Total Marks: 5]
Q6 a)	$(4^{-3})^2 = 4^{-3} \times 4^{-3}$ (product law) or $(4^{-3})^2 = 4^{-3\times2}$ (power law) $= 4^{-6} = \frac{1}{4^6}$	1 mark for applying the product law of exponents, or power law of exponents 1 mark for converting into power with positive integer
b)	SP = MP − D $80 - \left(\frac{5}{100} \times 800\right)$ = Rs 76	1 mark for formula 1 mark for manipulation 1 mark for accurate answer
		[Total Marks: 5]
Q7 a)	$5^4 \div 5^2 = 5^2$ 25 kg.	1 mark for correct operations 1 mark for correct answer
b)	Unitary method or ratio method. $\frac{2500 \times 4}{10}$ = Rs.1000	1 mark for method 1 mark for manipulation 1 mark for correct answer
		[Total Marks: 5]

	Section C	Marking Criteria
Q8 a)	$\frac{1}{6} - \frac{2}{9} - \frac{2}{5}$ LCM = 90 $\frac{15}{90} - \frac{20}{90} - \frac{36}{90}$ $= \frac{-41}{9}$	1 mark for solving brackets correctly 1 mark for equivalent fractions 1 mark for correct manipulation 1 mark for correct answer
b)	$11^2 = 121$ $290 - 121$ $\sqrt{169} = 13$	1 mark for logical thinking 1 mark for squaring 11 1 mark for understanding 1 mark for taking correct square root
c)	$7 \times \frac{13}{5}$ $= \frac{91}{5} = 18\frac{1}{5}$ kg	1 mark for correct operation 1 mark for correct answer
		[Total Marks: 10]
Q9 a)	$3 + 5 + 7 + 9 = 24$ $\frac{3}{24} \times 4608 =$ Rs 576 $\frac{5}{24} \times 4608 =$ Rs 960 $\frac{7}{24} \times 4608 =$ Rs 1344 $\frac{9}{24} \times 4608 =$ Rs 1728	1 mark for sum of the ratios 2 marks for method and finding the actual shares 1 mark for accuracy
b)	i) Suitable division of axes. Pet on x-axis Children on y-axis. ii) • Dog • Cat and goldfish • 36	1 mark for axes 2 marks for accurate heights of bars 1 mark for correct answer 1 mark for correct answer 1 mark for correct answer
		[Total Marks: 10]
Q 10 a)	$I = \frac{P \times R \times T}{24}$ $I_1 = \frac{24}{100} P$ $I_2 = \frac{30}{100} P$ $I_2 - I_1 = 144$ P= Rs 2400	1 mark for formula 1 mark for calculating I_1 1 mark for calculating I_2 1 mark for taking difference 1 mark for correct answer

b)	45 km + 5.35 km 11.8 km = 12 km	1 mark for adding and placing the decimal correctly 1 mark for rounding off
c)	A ⟷ B A •—— B A •——→ B	1 mark for arrows on both sides 1 mark for end point A and B 1 mark for one fixed end and one mark for extending end
		[Total Marks: 10]
Q 11 a)	CP of 50 books SP of 50 books 50 × 50 = Rs.2500 50 × 55 = Rs.2750 P = 2750 − 2500 $P\% = \frac{\text{Profit}}{CP} \times 100\ \%$ P% = 10%, P = Rs 250	2 marks for CP and SP 1 mark for using formula to find P% 1 mark for correct answer
b)	D = D% × CP D = Rs. 4800 SP = MP − D SP = Rs 31200	1 mark for formula 1 mark for finding discount 1 mark for formula 1 mark for correct answer
c)	$1\frac{3}{16} = 1.1875$ 1.6320 − 1. 1875 = 0.4445	1 mark for converting into decimal 1 mark for accurate answer
		[Total Marks: 10]
Q12 a)	i) A ∩ B = {7, 11, 15}  	1 mark for correct intersection 1 mark for Venn diagram
	ii) B ∪ C = {1, 2, 3, 4, 6, 7, 8, 10, 11, 15}  	1 mark for correct union 1 mark for correct Venne diagram

	iii) A − B = {5, 9, 13}  	1 mark for correct difference 1 mark for correct Venn diagram
b)	RHS = $\left(\frac{-9}{17} \times \frac{17}{27}\right) \times -\frac{8}{5} = \frac{8}{15}$ LHS = $\frac{-9}{17} \times \left(\frac{17}{27} \times -\frac{8}{5}\right) = \frac{8}{15}$ RHS = LHS Associative property of multiplication	1 mark for solving RHS 1 mark for solving LHS 1 mark for accuracy 1 mark for naming the property
		[Total Marks: 10]

Marking Scheme
Model Paper 2
Mid-Year Examination
Mathematics
Class VII

	Section A	Marking Criteria
Q1	I. A VI. A XI. D XVI. B II. A VII. B XII. A XVII. B III. C VIII. D XIII. B XVIII. D IV. D IX. C XIV. B XIX. A V. B X. B XV. C XX. C	1 mark for each correct answer
		[Total Marks: 20]

	Section B	Marking Criteria
Q2 a)	$\frac{28}{-48} = -\frac{7}{12}$	2 marks for simplification and accuracy
b)	$3.52 = \frac{352}{100}$, $1.2 = \frac{12}{10}$ $\frac{352}{100} \times \frac{12}{10}$ $4\frac{28}{125}$	1 mark for removing decimal 1 mark for simplification 1 mark for correct answer
		[Total Marks: 5]
Q3 a)	$59\frac{7}{11} = 59.63636\ldots$ $59.\dot{6}\dot{3}$	1 mark for correct method 1 mark for recurring form
b)	$\left(\frac{-4}{7}\right)^4 \times \left(\frac{-4}{7}\right)^2 = \left(\frac{-4}{7}\right)^{4+2}$ $\left(\frac{-4}{7}\right)^6 \div \left(\frac{-4}{7}\right)^5 = \left(\frac{-4}{7}\right)^{6-5}$ $-\frac{4}{7}$	1 mark for using product law 1 mark for using quotient law 1 mark for correct answer
		[Total Marks: 5]

Q4 a)	Using unitary method or ratio method $\frac{560 \times 11}{7} = 880$ Rs 180	1 mark 1 mark for simplification 1 mark for correct answer
b)	72% of 880= $\frac{72}{100} \times 880$ = Rs 633.60	1 mark for applying method correctly 1 mark for correct answer
		[Total Marks: 5]
Q5 a)	x°+45°+55°= 180° x=80°	1 mark for sum of the angles of a triangle 1 mark for correct answer
b)	Tax = Worth of Property × Tax Rate Tax = Rs 2100000 per annum. For 2 years Tax = Rs 4200000	1 mark for formula 1 mark for correct manipulation 1 mark for correct answer
		[Total Marks: 5]
Q6 a)	A = {names of the days of the week} B = {monday, wednesday, friday} A ∩ B = {monday, wednesday, friday}	1 mark for making set A and B 1 mark for making set A ∩ B
b)	2.587 rounded to hundredth place = 2.59	2 marks for marking number line and locating 2.587 1 mark for rounding off correctly
		[Total Marks: 5]
Q7 a)	Rate of Zakat = 2.5% 100 000 x 2.5% = Rs 2500 Zakat paid	1 mark for writing rate of Zakat 1 mark for simplification and accuracy
b)	Anum's product = $\frac{-3}{14}$ Fizza's product = $-\frac{1}{7}$ $\left(\frac{-3}{14}\right) + \left(-\frac{1}{7}\right)$ $\left(\frac{-3}{14}\right) - \left(\frac{1}{7}\right)$ $\frac{-5}{14}$	1 mark for multiplying the fraction 1 mark for addition 1 mark for accurate answer
		[Total Marks: 5]

	Section C	Marking Criteria
Q8 a)	$\frac{445.30}{7} \times 2$ 127.228571… 127.2286 km Non-terminating	1 mark for method 2 marks for simplification 1 mark for correct rounding off 1 mark for correct identification
b)	Taking square root of area to find one side of the table Square root of $\sqrt{8100}$ by long division or prime factorisation. = 90 cm	1 mark for correct method 1 mark for simplifying square root by either of the methods 1 mark for correct answer
c)	i) $2^6 > 6^2$ $64 > 36$ ii) $2^{10} > 10^2$ $1024 > 100$	1 mark for each part for finding the correct answer
		[Total Marks: 10]
Q9 a)	Using operation of multiplication $4\frac{1}{5} \times 5$ = 21 hours	1 mark for method 1 mark for simplification 1 mark for correct answer
b)	$\left(\frac{1}{2} \times \frac{4}{5}\right) \times \frac{3}{4} = \frac{1}{2}\left(\frac{4}{5} \times \frac{3}{5}\right)$ Associative property of multiplication.	1 mark for substituting the values 1 mark for verification: LHS = RHS 1 mark for naming the property
c)	$I = \frac{P \times R \times T}{100}$ $R = \frac{I \times 100}{P \times T}$ R = 5%	1 mark for using formula 1 mark for substituting the values 2 marks for simplification and accuracy
		[Total Marks: 10]
Q 10 a)	Men Days 40 15 25 x $x = \frac{40 \times 15}{25}$ = 24 days Inverse Variation	2 marks for method and placement of correct values 2 marks for correct equation and accuracy 1 mark for type of variation

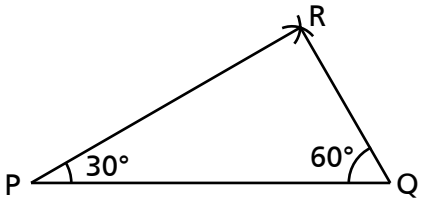
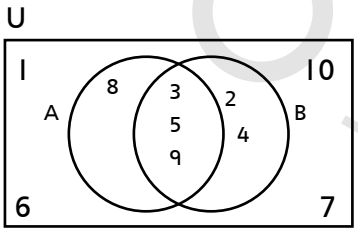
b)	20, 24, 28 −25, −30, −35 $\frac{20}{-25}, \frac{24}{-30}, \frac{28}{-35}$	1 mark for numerator 1 mark for denominator 1 mark for completing the pattern
c)	Sum of the angles of a triangle is equal to 180° 180° − 142° = 38°	1 mark for using formula 1 mark for correct answer
		[Total Marks: 10]
Q 11 a)	$\frac{30}{100} \times 80$ $\frac{55}{100} \times 80$ 80 − (24 + 44) 12 student	1 mark for Science students only 1 mark for Maths students only 2 marks for logical thinking 1 mark for correct answer
b)	1000- 790.75 Rs 209.25	1 mark for correct placement of decimal point 1 mark for correct answer
c)	(−7 × 11) − 5 (12 ÷ 2) + 3 $-\frac{82}{9}$	1 mark for finding numerator 1 mark for finding denominator 1 mark for accurate answer
		[Total Marks: 10]
Q12 a)	21 ÷ 15 $1\frac{6}{15}$ m 1.4 m	1 mark for applying correct method 1 mark for converting into decimal 1 mark for accuracy
b)	Taking square 81 + 5 86 chairs	1 mark for correct decision 1 mark for correct manipulation 1 mark for correct answer
c)	Taking square root By prime factorisation or long division, both are acceptable 78	1 mark for correct method 2 marks for steps of calculation 1 mark for correct answer
		[Total Marks: 10]

Marking Scheme
Model Paper I
Annual Examination
Mathematics
Class VII

	Section A [20 Marks]								Marking Criteria
Q1	I.	B	VI.	C	XI.	B	XVI.	A	I mark for each correct answer
	II.	A	VII.	D	XII.	B	XVII.	B	
	III.	C	VIII.	A	XIII.	D	XVIII.	C	
	IV.	B	IX.	C	XIV.	A	XIX.	D	
	V.	B	X.	B	XV.	C	XX.	B	
									[Total Marks: 20]

	Section B [30 Marks]	Marking Criteria
Q2 a)	Long division or prime factorisation 18 m 1 | 324 1 | −1 28 | 224 −224 xxx $324 = 2 \times 2 \times 3 \times 3 \times 3$ $\sqrt{324} = 2 \times 3 \times 3$ $= 18$ m	I mark for taking square root I mark for manipulation I mark for correct answer
b)	Loss = Rs 15000 Loss % = 32.97% or 33%	I mark for correct decision I mark for calculation and accuracy
		[Total Marks: 5]
Q3 a)	$y = 65°$ (vertically opposite angles) $z = 180° - y°$ (angles on a straight line) $z = 180° - 65°$ (angles on a straight line) $y = 65°$, $x = 115°$, and $z = 115°$	I mark for reasoning I mark for reasoning I mark for correct answer
b)	Volume of cylinder $= \pi r^2 h$ $= \left(\frac{22}{7}\right) \times 3 \times 3 \times 5$ $= 141.429 \text{ cm}^3$ or 141.43 cm^3	I mark for using formula. I mark for substitution and simplification with accuracy
		[Total Marks: 5]
Q4 a)	$\left(\frac{4}{9}\right) \times \left(\frac{3}{5}\right) \times \left(\frac{25}{12}\right)$ Multiplicative identity of $\left(\frac{5}{9}\right)$ is $\left(\frac{9}{5}\right)$	I mark for simplifying I mark for correct answer

b)	x = 10 10 x − 3 = 97 x = −5 10x − 3 = −53 x = −12 10x − 3 = −123	1 mark for correct answer 1 mark for correct answer 1 mark for correct answer
		[Total Marks: 5]
Q5 a)	D= D% × MP = Rs 3050 Discounted price = Rs 12200 He can not buy the bicycle. Needs Rs 1500 more.	1 mark for formula and correct manipulation 1 mark for finding discounted price 1 mark for correct decision and answer
b)	Insert 15 tally marks and 4 tally marks 10 (frequency) 6 (frequency)	1 mark for tally marking 1 mark for calculating frequency
		[Total Marks: 5]
Q6 a)	SA of cuboid = 2(lb + bh + hl) SA = 19 m^2	1 mark for using formula 1 mark for simplification and accuracy
b)	∠TOP = ∠MOQ = 115° (vertically opposite angles) ∠BMO + ∠MOQ = 180° x = 180° − 115° = 65°	1 mark for finding ∠MOQ with reasoning 1 mark for taking sum of interior angles 1 mark for correct answer
		[Total Marks: 5]
Q7 a)	Sum of ratios 5 + 6 + 9 = 20 $\left(\frac{5}{20}\right)$ × 8940 = Rs 2235 $\left(\frac{6}{20}\right)$ × 8940 = Rs 2682 $\left(\frac{9}{20}\right)$ × 8940 = Rs 4023	 1 mark for correct answer 1 mark for correct answer 1 mark for correct answer
b)	$\left(\frac{2}{3}x\right)^2 + 2\left(\frac{2}{3}x\right)(1) + (1)^2$ $\frac{4}{9}x^2 + \frac{4}{3}x + 1$	1 mark for using identity 1 mark for correct answer
		[Total Marks: 5]

	Section C [50 Marks]	Marking Criteria
Q8 a)	 $\angle P + \angle Q + \angle R = 180°$ $\angle R = 90°$	2 marks for construction of triangle with the help of compass 1 mark for using sum of angles formula 1 mark for correct value of $\angle PRQ$
b)	Draw a diagonal = 5.4 cm with midpoint O. Draw $\angle 70°$ at O, extending the arms measuring 3.1 cm. $\frac{3}{6} = \frac{5}{10} = \frac{2}{4} = \frac{1}{2}$	1 mark for diagonal 1 mark 1 mark for using the fact that two diagonals of a parallelogram bisect each other 1 mark for drawing ABCD by joining A, B, C, and D
c)	(i) $\left(\frac{3}{6}\right) = \left(\frac{5}{10}\right) = \left(\frac{2}{4}\right) = \left(\frac{1}{2}\right)$ (iii) $\left(\frac{11}{22}\right) = \left(\frac{7}{14}\right) = \left(\frac{4}{8}\right) = \left(\frac{1}{2}\right)$ (i) and (iii) are similar.	1 mark for finding correct ratio between the corresponding sides 1 mark for the correct answer
		[Total Marks: 10]
Q9 a)	Choosing x-axis for instruments, y-axis for number of sales. Correct heights of bars.	2 marks 2 marks
b)	Plot: 10 % of Rs22500000 = Rs 2250000 Gold: 2.5% of Rs 1255000 = Rs 31375	1 mark for correct formula for property tax 1 mark for correct answer 1 mark for correct formula for zakat 1 mark for correct answer
c)		2 marks for correct presentation
		[Total Marks: 10]
Q10 a)	(i) $I = \left(\frac{P \times R \times T}{100}\right)$ (ii) I = Rs 600 P = Rs 25000 R = 5%	1 mark for formula 1 mark for correct interest 1 mark for correct principal 1 mark for correct rate

b)	$a^2 + 2ab + b^2 = (a + b)^2$ $(a + 4b)^2 - 81$ $a^2 - b^2 = (a + b)(a - b)$ $(a + 4b + 9)(a + 4b - 9)$	1 mark for using identity 1 mark for using identity 1 mark for correct answer
c)	$11xy^2 + 12$ $(11xy^2 + 12) - (12 - 8xy^2)$ Rs $19xy^2$	1 mark for adding correctly 1 mark for subtracting correctly 1 mark for correct answer
		[Total Marks: 10]
Q11 a)	$(-8x^2 + 5y + xy) - (8x^2 - 5y - 4)$ $-16x^2 + 10y + xy + 4$ $-16 \times 4 + 10 \times 1 + 2 \times 1 + 4$ -48	1 mark for arranging the terms correctly 1 mark for correct subtraction 1 mark for correct substitution 2 marks for simplification and correct answer
b)	$\left(P + \frac{I}{P}\right)^2 = 7 + 2$ $\left(P + \frac{I}{P}\right)^2 = 9$ $\left(P + \frac{I}{P}\right) = 3$	 2 marks for completing the square 1 mark for correct answer
c)	$(a - b)^2 = a^2 - 2ab + b^2$ $4x^2 - 4x + 1$	1 mark for using the identity correctly 1 mark for accuracy and answer
		[Total Marks: 10]
Q12 a)	Property: The angle subtended by the diameter of a circle on either side of segment is 90^0. $\angle BAD = 90^\circ$ $\angle CBA = 180^\circ - (40^\circ + 90^\circ)$ $\angle CBA = 50^\circ$	 1 mark for using property 1 mark for the sum of the angles in a triangle 1 mark for correct answer
b)	Area of triangle $= b \times \frac{h}{2}$ $210 = 35 \times \frac{h}{2}$ $h = 12$ cm	1 mark for using correct formula 1 mark for substituting the values 1 mark for correct answer
c)	Surface Area of a cube $= 6\ l^2$ SA = 69.36 cm^2	1 mark for using formula 1 mark for correct answer
d)	Diameter of the circle = side of the square radius = 7.5 m Area of the circle $= \frac{22}{7} \times 7.5 \times 7.5$ A = 176.625 m^2 or 176.785 m^2	 1 mark for finding radius 1 mark for using formula with accuracy
		[Total Marks: 10]

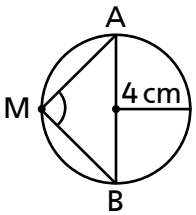
Marking Scheme
Model Paper 2
Annual Examination
Mathematics
Class VII

	Section A [20 Marks]	Marking Criteria
Q1	I. B VI. C XI. C XVI. A II. A VII. B XII. A XVII. B III. B VIII. D XIII. D XVIII. D IV. D IX. A XIV. B XIX. D V. C X. C XV. B XX. B	1 mark for each correct answer
		[Total Marks: 20]

	Section B [30 Marks]	Marking Criteria
Q2 a)	$\frac{(4-9)}{3}$ $= \frac{-5}{3} = -1\frac{2}{3}$	1 mark for substitution of values 1 mark for correct answer
b)	$9x^2 - 24xy + 16y^2 = 100$ $100 = 9x^2 - 24 \times -1 + 16y^2$ $9x^2 + 16y^2 = 76$	1 mark for squaring the equation 1 mark for substitution of values 1 mark for the correct answer
		[Total Marks: 5]
Q3 a)	$\angle CAB + \angle B + \angle C = 180^\circ$ $\angle CAB = 60^\circ$ $\angle x = 180^\circ - 60^\circ = 120^\circ$	1 mark for taking sum of the angles 1 mark for angles on a straight line and accuracy
b)	Surface Area of a cube $= 6l^2$ $l^2 = \frac{294}{6}$ cm^2 $l = 7$ cm	1 mark for using formula 1 mark for area of one side 1 mark for correct answer
		[Total Marks: 5]
Q4 a)	Let x be the original price. $x = 100 \times \frac{186}{93}$ $x =$ Rs 200	2 marks for using unitary or ratio method method 1 mark for correct answer
b)	Sum of the angles of a quadrilateral = 360° $76° + 50° + 104° + x° = 360°$ $x° = 130°$	1 mark for using formula 1 mark for correct answer
		[Total Marks: 5]

Q5 a)	$\frac{9}{12} = \frac{12}{16} = \frac{x}{20}$ x = 15 cm	1 mark for ratio of the length of corresponding sides 1 mark for correct answer
b)	Area of circular disc = πr^2 Radius = r = $\frac{d}{2}$ A = 1386 cm^2	1 mark for using formula 1 mark for finding radius 1 mark for correct answer
		[Total Marks: 5]
Q6 a)	AB ⟷ LM BC ⟷ MN	1 mark for correct correspondence 1 mark for correct correspondence
b)	7 × 10 ÷ 5 + 8 70 ÷ 5 + 8 = 14 + 8 = 22	1 mark for correct square roots 1 mark for applying correct order of operations 1 mark for correct answer
		[Total Marks: 5]
Q7 a)	$x°$ = 65° (Alternate angles formed by two parallel lines and a transversal are equal in size.) $y°$ = 65° (Vertically opposite angle or corresponding angles)	1 mark for correct $x°$ with reasoning 1 mark for correct $y°$ with reasoning
b)	(898)^2 = (900 − 2)^2 810000 − 3600 + 4 = 806404	1 mark for using identity 1 mark for simplification and accuracy 1 mark for correct answer
		[Total Marks: 5]

	Section C	**Marking Criteria**
Q8 a)	(2x + 3) = (3x − 7) 3x − 2x = 3 + 7 x = 10 units	1 mark for the understanding that l=b in a square 1 mark for simplification 1 mark for correct answer
b)	Let the cost of chair be Rs x. Cost of each table is Rs (x + 400) Cost of 2 tables Cost of 3 chairs 2x + 3x + 1200 = 7050 cost of a chair Rs 1250 cost of a table Rs 1650	1 mark for assuming cost of a chair 1 mark for finding cost of table 1 mark for making equations 1 mark for cost of chair 1 mark for cost of table
c)	$a^2 - b^2 = (a+b)(a-b)$ (5x + 3y + 4z)(5x − 3y − 4z)	1 mark for using correct identity 1 mark for correct answer
		[Total Marks: 10]

Q9 a)	Steps of construction: 1. Draw a line PQ = 6.4 cm. 2. Using compass with suitable radius, draw arcs from P above and below PQ. 3. Repeat the above step with same radius from Q, intersecting the previous arcs at A and B. 4. Join A and B. 5. PO = OQ = 3.2 cm	1 mark for each step of construction
b)	 $\angle AMB = 90^\circ$ (angle subtended by a diameter on either side of the segment is a right angle.)	1 mark for drawing circle and diameter 1 mark for taking M and joining AM and BM 1 mark for correct value of $\angle AMB$
c)	$\angle A \longleftrightarrow \angle R$ $\angle C \longleftrightarrow \angle Q$	1 mark for correct answer 1 mark for correct answer
		[Total Marks: 10]
Q 10 a)	Area = length × breadth Area of bigger rectangle, $A_1 = 120\ m^2$ $A_2 = 6 \times 8$ $A_1 - A_2$ $= 72\ m^2$	1 mark for formula 1 mark for area of bigger rectangle 1 mark for area of smaller rectangle 1 mark for area of shaded region 1 mark for the correct answer
b)	Area of trapezium $= \frac{1}{2} \times$ sum of parallel sides × h $57 = \frac{1}{2}(7 + 12) \times h$ h = 6 cm	1 mark for using formula 1 mark for substituting the values 1 mark for correct answer
c)	$40° + x° + 25° = 180°$ $x° = 115°$ $y° + 80° = 180°$ $y° = 100°$	1 mark for finding the correct value of x 1 mark for finding the correct value of y
		[Total Marks: 10]

Q 11 a)	(i) $x + 126 + 117 + 81 = 360°$ $x = 36°$ (ii) $\frac{81}{360} \times 100000$ Rs 22500 (iii) % $= \frac{22500}{100000} \times 100$ = 22.5% (iv) Expense in other area = Rs 10000 (v) Amount spent on food = Rs 35000	1 mark for value of x 1 mark for correct travel expense 1 mark for correct percentage 1 mark for correct answer 1 mark for correct answer
b)	Volume of cylinder = $\pi r^2 h$ $2\pi r$ = 88 cm r = 14 cm $V = \frac{22}{7} \times 14 \times 14 \times 10$ V = 6160 cm^3	1 mark for formula 1 mark for using circumference to find r 1 mark for substituting the values 1 mark for manipulation 1 mark for correct answer
		[Total Marks: 10]
Q12 a)	(i) $60 \times \frac{5}{2}$ Distance = 150 km (ii) $2 \times \frac{135}{60}$ Fuel = 4.5 l	1 mark for method. Unitary or ratio method 1 mark for accurate answer 1 mark for method 1 mark for correct answer
b)	Discount = Actual price × D% = Rs 1800 Selling price = Actual price – Discount = Rs 34200	1 mark for using formula 1 mark for correct value 1 mark for formula 1 mark for correct answer
c)	$(a - b)(a + b) = a^2 - b^2$ $(3x - 5)(3x + 5)$ $= 9x^2 - 25$	1 mark for using correct identity 1 mark for correct answer
		[Total Marks: 10]

Marking Scheme
Model Paper 3
Annual Examination
Mathematics
Class VII

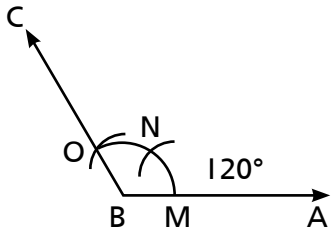
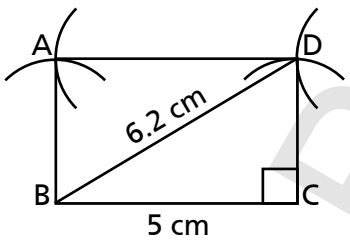
	Section A [20 Marks]	Marking Criteria
Q1	I. A VI. C XI. A XVI. B II. B VII. B XII. D XVII. D III. C VIII. C XIII. B XVIII. B IV. C IX. C XIV. C XIX. A V. A X. B XV. B XX. C	1 mark for each correct answer
		[Total Marks: 20]

	Section B [30 Marks]	Marking Criteria
Q2 a)	$x + 2x = 180°$ Interior angles between two parallel lines sum up to 180° $x = 60°$	1 mark for correct reasoning 1 mark for correct answer
b)	$r = \frac{d}{2} = 21$ cm $C = 2\pi r$ $C = 132$ m	1 mark for finding the radius 1 mark for using correct formula 1 mark for answer and accuracy
		[Total Marks: 5]
Q3 a)	$a^2 + 2ab + b^2 = (a + b)^2$ $(x + 11)^2$	1 mark for using identity 1 mark for answer and accuracy
b)	PQ = PR $\angle PTQ = \angle PTR = 90°$ PT is common side. SAS property satisfied. Δ PQT = Δ PRT	1 mark for equal sides 1 mark for equal angles 1 mark for common equal side
		[Total Marks: 5]
Q4 a)	$(30xy + 12y - 14) - (24xy - 10y - 18)$ $30xy + 12y - 14 - 24xy + 10y + 18$ $6xy + 22y + 4$	1 mark for correct placement of expressions 1 mark for changing the sign 1 mark for correct answer

b)	Base angles of isosceles triangle are equal. $x + x + 80° = 180°$ $x = 50°$	1 mark for identifying isosceles triangle and taking the sum of the angles of a triangle 1 mark for correct answer
		[Total Marks: 5]
Q5 a)	$\frac{AB}{PQ} = \frac{BC}{QR} = \frac{AC}{PR}$ $\frac{BC}{QR} = \frac{3}{6} = \frac{1}{2}$ $x = 9$ cm, $y = 12.4$ cm	1 mark for ratio of the corresponding lengths of the sides 1 mark for numerical ratio 1 mark for correct answer
b)	$B \cap D = \varnothing$ $A \cup C = \{2,3,4,5,6,7,20,25,30\}$	1 mark for correct intersection 1 mark for correct union
		[Total Marks: 5]
Q6 a)	$P = \frac{I \times 100}{R \times T}$ $P = \frac{3000 \times 100}{5 \times 6}$ P = Rs 10000	1 mark for correct formula 1 mark for simplification 1 mark for correct answer
b)	Using identity or direct multiplication method; accept both the methods. $x^2 + x + \frac{1}{4}$	1 mark for correct method 1 mark for correct answer
		[Total Marks: 5]
Q7 a)	SA = 2(lb + bh + hl) SA = 2 × 74 148 cm^2	1 mark for formula 1 mark for correct answer
b)	$\frac{(m-1)}{3} - \left(\frac{2m}{7}\right) = -1$ $\frac{(m-7)}{21} = -1$ m = −14	1 mark for displacement of terms 1 mark for simplification 1 mark for correct answer
		[Total Marks: 5]

	Section C	Marking Criteria
Q8 a)	Let Ryan's age = x years Abid's age = $x - 5$ $x + 4 = 2(x - 1)$ Ryan's age = 6 years Abid's age = 1 year	1 mark for supposition 1 mark for developing equation 1 mark for correct answer 1 mark 1 mark for correct

b)	WX = YZ, WZ = XY (opposite sides of a parallelogram) $\angle WXY = \angle WZY$ (opposite angles of parallelogram) $\Delta WXY = \Delta WZY$ SAS Property is satisfied	1 mark for correct reason 1 mark for correct reason 1 mark for using the property
c)	Area of rhombus = $\frac{1}{2} \times d_1 \times d_2$ d_1 and d_2 are diagonals of a rhombus. Area of the tile = 675 cm^2 = 0.0675 m^2 81 m^2	1 mark for area of tile 1 mark for conversion in m^2 1 mark for area of floor
		[Total Marks: 10]
Q9 a)	x , x + 5 $x + (x + 5) = 55$ $x = 25$ 25, 30	1 mark for supposing correct numbers 1 mark for developing equation 1 mark for value of x 1 mark for consecutive multiples of 5
b)	Surface area of the box = 450 cm^2 Only 3 sides are painted. Area of painted surface = 450 ÷ 2 = 225 cm^2 OR Adding the areas of 3 surfaces 225 cm^2	1 mark for finding area of the box 1 mark for total area of 3 surfaces
c)	Volume of cylinder = $r^2 h$ = 3234 cm^3	1 mark for formula 1 mark for correct answer
d)	0.58 x 3.192 1.85136 $1\frac{5321}{6250}$	1 mark for correct multiplication and placement of decimal point 1 mark for correctt fraction
		[Total Marks: 10]
Q 10 a)	(i) Circumference = $2\pi r$ = 176 cm 176 x 5 = 880 cm (ii) 1.76 m	1 mark for formula 1 mark for substitution and simplification 1 mark for correct answer 1 mark for correct conversion

b)		1 mark for line and arc 2 marks for points N and O 1 mark for ∠ABC = 120°
c)	$9x^2 - 4x - 5$ $6x^2 - 6$ or $6(x^2 - 1)$	1 mark for B + C 1 mark for B + C − A Both the answers are acceptable
		[Total Marks: 10]
Q 11 a)	Draw BC = 5 cm ∠BCD = 90° Draw an arc of radius 6.2 cm from B at D. BD = 6.2 cm. Draw an arc from D equal to BC. Draw an arc with radius CD from B intersecting at A. Join D to A and A to B. 	1 mark for all the angles of a rectangle are 90°. 1 mark for diagonal BD = 6.2 cm 1 mark for arc with radius BC from D 1 mark for finding AB 1 mark for rectangle ABCD
b)	23 failed out of 100 $\frac{115 \times 100}{23} = 500$ 385 passed the examination.	1 mark 1 mark for method 1 mark for correct answer
c)	a : b = 5 : 3 b : c = 1 : 6 a : b : c 5 : 3 3 : 18 5 : 3 : 18	1 mark for equivalent ratios 1 mark for correct continued ratio
		[Total Marks: 10]
Q12 a)	x be the smaller angle $x° + 36°$ $x° + (x° + 36°) = 180°$ sum of supplementary angles $x° = 72°$ $x° + 36° = 108°$	1 mark for supposing smaller angle 1 mark for larger angle 1 mark for reasoning 1 mark for correct answer

b)	$(2x^3 - 3x^2y+2xy^2+3y^2) - (x^3 -2x^2y+3xy^2+ 4y^2)$ $x^3 - x^2y - xy^2 - y^2$	1 mark for correct placement of terms 1 mark for subtracting with change of signs 1 mark for correct answer
c)	$x = 20°$ Action movies: $\frac{120}{360} \times 1440$ $= 480$ Comedy movies: $\frac{60}{360} \times 1440$ $= 240$	1 mark for value of x 1 mark for correct answer 1 mark for correct answer
		[Total Marks: 10]

Evaluation Feedback to Student
Exemplar

Mid-Year Examination Model Paper 1 **Your Marks: /100**

	Section A			
	Question	**Your Answer**	**Correct Answer**	**Marks**
Q1 IX)	Which of the following is a perfect square? A 72 B 448 C 196 D 160	D 160 You gave the wrong answer thinking that 16 is a perfect square, which is only true when there are zeros at unit and tens places. Remember: Square numbers ending with zeros have even number of zeros in the end.	C 196	0/1

	Section B			
	Question	**Your Answer**	**Correct Answer**	**Marks**
Q7. b)	Anum and Fiza picked two fraction cards and multiplied them. What will be the sum of their products.	$\frac{-5}{7} \times \frac{3}{10} = \frac{3}{14}$ $\frac{4}{13} \times \left(\frac{-13}{28}\right) = \frac{1}{7}$ $\frac{3}{14} + \frac{1}{7} = \frac{5}{7}$ You did simplification and addition correct but did not put -ve sign with the products, so your answer is wrong.	$\frac{-5}{14}$	1/3

	Section C			
	Question	**Your Answer**	**Correct Answer**	**Marks**
Q9. b)	Verify the property $(a \times b) \times c = a \times (b \times c)$ by taking $a = \frac{1}{2}$, $b = \frac{4}{5}$, and $c = \frac{3}{5}$. Also name the property.	You verified the property by showing LHS = RHS, which is correct. You mentioned the property name as Commutative Property which is wrong.	The correct property is Associative Property	2/3