

# Back to SCHOOL



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# Most Essential Learning Competencies (MELCs)



**Grade Level:** Grade 10  
**Subject:** Mathematics

Quarter	Content Standards	Performance Standards	Most Essential Learning competencies	Duration	K to 12 CG Code
	The learner...	The learner...	The learner...		
Q1	demonstrates understanding of key concepts of sequences, polynomials and polynomial equations.	is able to formulate and solve problems involving sequences, polynomials and polynomial equations in different disciplines through appropriate and accurate representations.	generates patterns.	Week 1 to 2	M10AL-Ia-1
			illustrates an arithmetic sequence		M10AL-Ib-1
			determines arithmetic means, nth term of an arithmetic sequence and sum of the terms of a given arithmetics sequence.		
			illustrates a geometric sequence.	Week 3	M10AL-Id-1
			differentiates a geometric sequence from an arithmetic sequence.		M10AL-Id-2
			determines geometric means, nth term of a geometric sequence and sum of the terms of a given finite or infinite geometric sequence	Week 4	
			solves problems involving sequences.	Week 5	M10AL-If-2
			performs division of polynomials using long division and synthetic division.	Week 6	M10AL-Ig-1
			proves the Remainder Theorem, Factor Theorem and the Rational Root Theorem.		
			factors polynomials.	Week 7	M10AL-Ih-1
			illustrates polynomial equations.	Week 8	M10AL-Ii-1
			solves problems involving polynomials and polynomial equations.	Week 9	M10AL-Ij-2
Q2	demonstrates understanding of key concepts of polynomial function.	is able to conduct systematically a mathematical investigation involving polynomial functions in different fields.	illustrates polynomial functions.	Week 1 to 2	M10AL-IIa-1
			understand, describe and interpret the graphs polynomial functions.		
			solves problems involving polynomial functions.		M10AL-IIb-2

Quarter	Content Standards	Performance Standards	Most Essential Learning competencies	Duration	K to 12 CG Code
	The learner...	The learner...	The learner...		
	demonstrates understanding of key concepts of circles and coordinate geometry.	1. is able to formulate and find solutions to challenging situations involving circles and other related terms in different disciplines through appropriate and accurate representations.  2. is able to formulate and solve problems involving geometric figures on the rectangular coordinate plane with perseverance and accuracy.	derives inductively the relations among chords, arcs, central angles, and inscribed angles.	Week 3 to 4	M10GE-IIc-1
			proves theorems related to chords, arcs, central angles, and inscribed angles.		M10GE-IIc-d-1
			illustrates secants, tangents, segments, and sectors of a circle.	Week 5 to 6	M10GE-IIe-1
			proves theorems on secants, tangents, and segments.		M10GE-IIe-f-1
			solves problems on circles.		M10GE-IIf-2
			applies the distance formula to prove some geometric properties.	Week 7	M10GE-IIg-2
			illustrates the center-radius form of the equation of a circle.	Week 8	M10GE-IIh-1
			determines the center and radius of a circle given its equation and vice versa.		M10GE-IIh-2
			graphs and solves problems involving circles and other geometric figures on the coordinate plane.	Week 9	
Q3	demonstrates understanding of key concepts of combinatorics and probability.	is able to use precise counting technique and probability in formulating conclusions and making decisions.	illustrates the permutation of objects.	Week 1 to 2	M10SP-IIIa-1
			solves problems involving permutations		M10SP-IIIb-1
			illustrates the combination of objects.	Week 3 to 4	M10SP-IIIc-1
			differentiates permutation from combination of $n$ objects taken $r$ at a time.		M10SP-IIIc-2
			solves problems involving permutations and combinations	Week 5	M10SP-IIId-e-1
			illustrates events, and union and intersection of events.	Week 6	M10SP-IIIf-1
			illustrates the probability of a union of two events.	Week 7	M10SP-IIIg-1
			finds the probability of $(A \cup B)$ .	Week 8	M10SP-IIIg-h-1

Quarter	Content Standards The learner...	Performance Standards The learner...	Most Essential Learning competencies The learner...	Duration	K to 12 CG Code
			illustrates mutually exclusive events.	Week 9	M10SP-IIIi-1
			solves problems involving probability.		M10SP-IIIi-j-1
Q4	demonstrates understanding of key concepts of measures of position.	is able to conduct systematically a mini-research applying the different statistical methods.	illustrates the following measures of position: quartiles, deciles and percentiles.	Week 1	M10SP-IVa-1
			calculates a specified measure of position (e.g. 90 <sup>th</sup> percentile) of a set of data.	Week 2	M10SP-IVb-1
			interprets measures of position.	Week 3	M10SP-IVc-1
			solves problems involving measures of position.	Week 4 to 5	M10SP-IVd-e-1
			formulates statistical mini-research.	Week 6 to 7	M10SP-IVf-g-1
			uses appropriate measures of position and other statistical methods in analyzing and interpreting research data.	Week 8 to 9	M10SP-IVh-j-1