

Performance Level Descriptors

Mathematics

Grade 7

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Performance Level Descriptors

The Forward Exam is a summative assessment which provides information about what students know and can do in relation to the Wisconsin Academic Standards at each grade-level. Students receive a score based on their performance in each content area. The Student Performance Level is a categorical score.

Range performance levels are based on predetermined score ranges. The score ranges for each content area are set using a process in which Wisconsin educators carefully consider the academic standards, performance level descriptors, and test questions. There are four performance levels: *Developing*, *Approaching*, *Meeting*, and *Advanced*. The goal for all students is to score at the meeting or advanced level.

More-detailed descriptions of the specific concepts and skills are provided for each indicator in the **Performance Level Descriptors** (PLDs). Range PLDs are descriptions of the knowledge and skills expected at each of the four performance levels. The Range PLDs are based on the approved 2021 state-adopted content standards.

PLDs show a *progression of knowledge and skills* expected across the performance levels. It is important to understand that a student should demonstrate an understanding of the knowledge and skills within a performance level *as well as all content and skills in any performance levels that precede it, if any*. For example, a student who is meeting expectations should also possess the knowledge and skills described at the developing and approaching performance levels.

Policy Performance Level Descriptors			
Developing	Approaching	Meeting	Advanced
Student is at the beginning stages of developing the knowledge and skills described in the Wisconsin Academic Standards for their grade level needed to be on-track for future learning.	Student is approaching the knowledge and skill expectations described in the Wisconsin Academic Standards for their grade level needed to be on-track for future learning.	Student is meeting the knowledge and skill expectations described in the Wisconsin Academic Standards for their grade level and is on-track for future learning.	Student demonstrates a thorough understanding of the knowledge and skills described in the Wisconsin Academic Standards for their grade level and is on-track for future learning.

Range Performance Level Descriptors

Ratios and Proportional Relationships			
Developing	Approaching	Meeting	Advanced
A student at this level can likely	A student at this level can likely	A student at this level can likely compute unit rates, with complex fractions,	A student at this level can likely compare unit rates to solve real-world problems, and
	determine whether two quantities represented by points on a graph are in a proportional relationship by observing a straight line going through the origin,	determine whether two quantities represented in a table are in a proportional relationship,	
		identify the constant of proportionality from a graph, table, equation, diagram, or verbal description of a proportional relationship,	
		represent proportional relationships with a graph, table, equation, diagram, or verbal description of a proportional relationship,	
		explain the meaning of a point (x, y) on the graph of a proportional relationship, and	
use proportional relationships to solve single-step or simple ratio and percent problems.	use proportional relationships to solve real-world, single-step or simple ratio and percent problems.	use proportional relationships to solve real-world, multi-step or complex ratio and percent problems.	compare two different proportional relationships to solve real-world, multi-step or complex ratio and percent problems.

The Number System			
Developing	Approaching	Meeting	Advanced
A student at this level can likely identify two quantities that combine to make zero,	A student at this level can likely show that two quantities combine to make zero on a number line,	A student at this level can likely describe real-world situations where two quantities combine to make zero,	A student at this level can likely
		represent subtraction of rational numbers as adding the additive inverse,	
add and subtract positive rational numbers,	add and subtract rational numbers,	add and subtract rational numbers to solve real-world, single-step problems,	add and subtract rational numbers to solve real-world, multi-step problems, and
		interpret the sums or differences of rational numbers within a real-world context,	
multiply and divide positive rational numbers, and	multiply and divide rational numbers, and	multiply and divide rational numbers to solve real-world, single-step problems,	multiply and divide rational numbers to solve real-world, multi-step problems.
		interpret the product or quotient of rational numbers within a real-world context,	
		apply the rules for multiplying or dividing signed numbers, and	
recognize that the quotient of two integers is a rational number for any non-zero denominator.	recognize that a decimal that terminates in zeros or repeats is a rational number.	convert a rational number to a decimal using long division.	

Expressions and Equations			
Developing	Approaching	Meeting	Advanced
A student at this level can likely	A student at this level can likely	A student at this level can likely	A student at this level can likely
recognize equivalent expressions,	add and subtract linear expressions with rational coefficients, rewrite an expression in a different form,	factor and expand linear expressions with rational coefficients, rewrite an expression in a different form and explain how it relates to a context,	write two equivalent expressions and explain how both relate to the context,
solve multi-step, mathematical problems with rational numbers of the same form,	solve multi-step, mathematical problems with rational numbers in any form,	solve multi-step, real-life problems with rational numbers in any form,	
		use estimation strategies to assess the reasonableness of a calculation involving rational numbers in any form,	
solve equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are rational numbers, and	write equations that can be used to represent word problems of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are rational numbers,	solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are rational numbers,	create a word problem that corresponds to a given equation of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are rational numbers, and
solve inequalities of the form $px + q > r$ and $px + q < r$, where p , q , and r are rational numbers and graph the solution set.	write inequalities that can be used to represent word problems of the form $px + q > r$ and $px + q < r$, where p , q , and r are rational numbers, and	solve word problems leading to inequalities of the form $px + q > r$ and $px + q < r$, where p , q , and r are rational numbers and graph the solution set, and	create a word problem that correspond to a given inequality of the form $px + q > r$ and $px + q < r$, where p , q , and r are rational numbers.
	graph and interpret the solution set to an inequality.	graph and interpret the solution set to an inequality that represents a word problem.	

Geometry			
Developing	Approaching	Meeting	Advanced
A student at this level can likely identify a scale factor using model dimensions and actual dimensions,	A student at this level can likely calculate an unknown dimension using a scale factor,	A student at this level can likely calculate unknown dimensions and area using a scale factor,	A student at this level can likely
		create a scale drawing,	
		draw geometric shapes with given conditions,	
		construct triangles from three measures of angles or sides and identify conditions creating a unique triangle, more than one triangle, or no triangle,	
	identify the two-dimensional figure that results from slicing a three-dimensional figure parallel to the base,	draw or describe the two-dimensional figure that results from slicing a three-dimensional figure parallel to the base,	draw or describe the two-dimensional figures that results from slicing a three-dimensional figure parallel and perpendicular to the base,
identify parts of a circle, including radius, diameter, circumference, and	know the formulas for area and circumference of a circle,	solve problems involving the area and circumference of a circle,	solve multi-step problems involving the area and circumference of a circle, and
		calculate the area of a circle when given the circumference when given the area,	provide an informal derivation of the relationship between the circumference and area of a circle.
identify supplementary, complementary, vertical, and adjacent angles.	use facts about supplementary, complementary, vertical, and adjacent angles to solve single-step problems, and	use facts about supplementary, complementary, vertical, and adjacent angles to solve multi-step problems, and	

	solve real-world and mathematical problems involving the area of two-dimensional shapes composed of triangles, quadrilaterals, and polygons.	solve real-world and mathematical problems involving the volume and surface area of three-dimensional objects composed of cubes and right prisms.	
Statistics and Probability			
Developing	Approaching	Meeting	Advanced
A student at this level can likely distinguish between a population and a sample,	A student at this level can likely distinguish between a sample that is random and representative of a population and a sample that is not random and not representative of a population,	A student at this level can likely use data from random samples to draw inferences about a population,	A student at this level can likely
		use measures of center and measures of variability for numerical data from random samples to make an informal comparison about two populations,	use measures of center and measures of variability for numerical data from random samples to make multiple informal comparisons about two populations,
recognize that the probability of a chance event is a number between 0 and 1, and	recognize the corresponding likelihood of events with probabilities near 0, $\frac{1}{2}$, and 1,	approximate the probability or likelihood of a chance event based on collected data,	
		approximate a relative frequency based on a given probability,	
	use a probability model to determine the probability of events and make comparisons to observed frequencies, and	develop and use a probability model to determine the probability of events and make comparisons to observed frequencies, and	compare and evaluate multiple probability models, and

recognize that the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.	represent sample spaces for compound events using lists, tables, and tree diagrams.	determine the probability of compound events.	design and use simulation to generate frequencies for compound events.
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