

OUTCOMES		ASSESSMENT RUBRICS			
N9.1 Demonstrate (concretely, pictorially, and symbolically) understanding of powers with integral bases (excluding base 0) and whole number exponents including: representing using power; evaluating powers; powers with an exponent of zero; solving situational questions					
Level	Beginning Spend some extra time with the criteria and ask for help.	Approaching Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.	Proficient You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.	Mastery Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.	
Criteria					
Outcome N9.1A: Students will be able to demonstrate understanding of powers with integral bases (excluding 0) and whole number exponents.	I need more help with becoming consistent with the criteria.	I can label the base, exponent and power. I can evaluate powers with positive bases with or without technology.	I can show repeated multiplication of a power. I can write as a power of 10. I can evaluate powers (including those with an exponent of 0) with or without technology. I can predict whether the value of a given power will be positive or negative without evaluating. I can determine which of two powers is greater. I can write a number as a power with a given base.	I can analyze the role of brackets in powers. I can explain the difference between the exponent and the base of a power. I can justify why a power with exponent zero is 1. I can explain my strategies for evaluating.	
Outcome N9.1B: Students will understand and apply the exponent laws	I need more help with becoming consistent with the criteria.	I can write an expression as a single power that involves one step	I can write an expression as a single power that involves multiple laws.	I can apply the order of operations to expressions involving powers. I can explain my strategy. I can perform error analysis. I can show why laws do not apply to sums or differences of powers with the same base.	

OUTCOMES	ASSESSMENT RUBRICS			
N9.2 Demonstrate understanding of rational numbers including: comparing and ordering; relating to other types of numbers; solving situational questions				
Level Criteria	Beginning Spend some extra time with the criteria and ask for help.	Approaching Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.	Proficient You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.	Mastery Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.
Outcome N9.2A: Students will demonstrate an understanding of how to order rational numbers	I need more help with becoming consistent with the criteria.	I can consistently order and compare rational numbers in decimal form	I can consistently order and compare rational numbers in any form. I can consistently determine a rational number between a pair of rational numbers. I can consistently determine equivalent rational numbers. I can consistently place rational numbers on a number line.	I am able to determine the difference between a rational and irrational number and explain my choice. I am able to explain why a group of rational numbers are in order. I am able to explain why a number is between a pair of rational numbers.
Outcome N9.2B Students will demonstrate an understanding of how to add and subtract rational numbers including those in situational questions	I need more help with becoming consistent with the criteria	I can consistently add and subtract rational numbers.	I can consistently determine which operation to use in a situational problem that involves addition or subtraction.	I can solve situational questions that involve addition or subtraction of rational numbers. I can interpret my answer to a situational problem. I can perform error analysis. I can explain my strategy for adding or subtracting rational numbers.

Outcome N9.2C Students will demonstrate an understanding of how to multiply and divide rational numbers including those in situational questions.	I need more help with becoming consistent with the criteria	I can consistently multiply and divide rational numbers.	I can consistently solve situational questions that involved multiplication or division of rational numbers.	I can interpret my answer to a situational problem. I can perform error analysis. I can explain my strategy for multiplying or dividing rational numbers.
Outcome N9.2D Students will demonstrate an understanding of how to apply the order of operations to rational numbers including those in situational questions.	I need more help with becoming consistent with the criteria	I can consistently choose and explain the operation that needs to be done first.	I can consistently apply order of operations with rational numbers.	I am able to solve situational questions that involve applying order of operations with rational numbers. I am able to perform error analysis. I am able to explain my strategy for solving with order of operations.

OUTCOMES	ASSESSMENT RUBRICS			
N9.3 Extend understanding of square roots to include the square root of positive rational numbers.				
Level	Beginning Spend some extra time with the criteria and ask for help.	Approaching Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.	Proficient You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.	Mastery Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.
Criteria				
Outcome N9.3: Students will demonstrate understanding of square roots.	I need more help with becoming consistent with the criteria.	I can consistently evaluate square roots of positive rational numbers.	I can consistently: *determine if a rational number is a perfect or non-perfect square root *solve for the missing side in a right triangle using the Pythagorean theorem *demonstrate the relationship between the area and side length of a square *determine the rational number for which a given rational number is its square root * determine a rational number whose square root would be between two given rational numbers	I can solve situational questions. I can determine an estimate of the square root of a non-perfect square. I can perform error analysis. I can explain why a rational number is a perfect or non-perfect square.

****These were previously 1-1 and 1-2**

OUTCOMES	ASSESSMENT RUBRICS			
P9.1 Demonstrate understanding of linear relations including graphing, analyzing, interpolating and extrapolating, solving situational questions				
Level Criteria	Beginning Spend some extra time with the criteria and ask for help.	Approaching Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.	Proficient You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.	Mastery Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.
Outcome P9.1A: Students will be able to analyze, interpolate and extrapolate linear relations including those in situational questions.	I need more help with becoming consistent with the criteria.	I can determine if a graph is linear or non-linear and explain why.	I can consistently interpolate and extrapolate to determine a value from a graph of a linear relation.	I am able to verify an interpolated or extrapolated value from a graph. I am able to show understanding of interpolation and extrapolation.
Outcome P9.1B Students will be able to graph linear relations	I need more help with becoming consistent with the criteria.	I can consistently graph a linear relation given the table of values.	I can consistently graph a linear relation and determine what type of line it is.	I can explain my work for graphing linear relations. I can graph a situational question and interpret the results. I can explain why a graph is going to be increasing, decreasing, vertical or horizontal.

OUTCOMES		ASSESSMENT RUBRICS			
P9.2 Model and solve situational questions using linear equations of the form $ax = b$; $x/a = b$; $ax + b = c$; $x/a + b = c$; $ax = b + cx$; $a(x + b) = c$; $ax + b = cx + d$; $a(bx + c) = d(ex + f)$; $a/x = b$ where $a, b, c, d, e,$ and f are rational numbers.					
Level		Beginning Spend some extra time with the criteria and ask for help.	Approaching Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.	Proficient You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.	Mastery Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.
Criteria					
Outcome P9.2A: Students will be able to solve linear equations with variables on one side of the equation including those involved in situational questions.		I need more help with becoming consistent with the criteria.	I can solve up to three step equations that do not contain fractions or variables in the denominator (other than the basic $x/3 + 2 = 5$ type of fraction)	I can consistently solve all types of equations with a variable on one side.	I can solve situational questions. I can verify my answers. I can explain my steps. My work is accurate. I can model a linear equation. I can explain each part of the diagram and how it represents the equation.
Outcome P9.2B: Students will be able to solve linear equations with variables on both sides of the equation including those involved in situational questions.		I need more help with becoming consistent with the criteria	I can solve up to three step equations that do not contain fractions or variables in the denominator (other than the basic $x/3 + 2 = 5$ type of fraction)	I can consistently solve all types of equations with variables on both sides.	I can solve situational questions. I can verify my answers. I can explain my steps. My work is accurate. I can model a linear equation. I can explain each part of the diagram and how it represents the equation.

OUTCOMES	ASSESSMENT RUBRICS			
P9.3 Demonstrate understanding of single variable linear inequalities with rational coefficients including: solving inequalities; verifying; comparing; graphing				
<p>Level</p> <p>Criteria</p>	<p><u>Beginning</u> Spend some extra time with the criteria and ask for help.</p>	<p><u>Approaching</u> Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p><u>Proficient</u> You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p><u>Mastery</u> Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome P9.3: Students will demonstrate an understanding of linear inequalities</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I can consistently graph a given inequality</p>	<p>I can consistently</p> <ul style="list-style-type: none"> • solve a linear inequality • write an inequality for a given statement • write an inequality given a graph 	<p>I can solve situational questions. I can verify my answer. I can interpret solutions.</p>

OUTCOMES	ASSESSMENT RUBRICS			
P9.4 Demonstrate understanding of polynomials (limited to polynomials of degree less than or equal to 2) including: modeling, generalizing strategies for addition, subtraction, multiplication, and division; analyzing; relating to context; comparing for equivalency.				
Level Criteria	<u>Beginning</u> Spend some extra time with the criteria and ask for help.	<u>Approaching</u> Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.	<u>Proficient</u> You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.	<u>Mastery</u> Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.
<b style="background-color: green; color: black;">Outcome #P9.4A: Students will be able to recognize, write and classify polynomials	I need more help with becoming consistent with the criteria.	I can consistently: <ul style="list-style-type: none"> • identify monomials, binomials, trinomials • identify the variable • state the degree • state the number of terms • state the coefficients • state the constant term 	I can consistently <ul style="list-style-type: none"> • write a monomial, binomial or trinomial • compare/write equivalent polynomials 	I can describe relationships between a variable in degree 1 and a variable in degree 2. I can analyze polynomials and discuss the significance of parts of the polynomial.
<b style="background-color: green; color: black;">Outcome P9.4B Students will be able to add and subtract polynomials	I need more help with becoming consistent with the criteria	I can consistently add polynomials	I can consistently subtract polynomials	I can solve situational questions. I can perform error analysis. I can explain why terms with different variable exponents cannot be added or subtracted.
<b style="background-color: green; color: black;">Outcome P9.4C Students will be able to multiply and divide polynomials	I need more help with becoming consistent with the criteria	I can multiply a constant by a polynomial. I can divide a polynomial by a constant	I can multiply a monomial by a polynomial. I can divide a polynomial by a monomial.	I can solve situational questions. I can perform error analysis. I can describe relationships between multiplication of a polynomial and a monomial and determining the area of a rectangular region.

OUTCOMES	ASSESSMENT RUBRICS			
<p>SS9.1 Demonstrate understanding of circle properties including: perpendicular line segments from the centre of a circle to a chord; inscribed angles subtended by the same arc have the same measure; the measure of a central angle is twice the measure of an inscribed angle subtending the same arc; tangents to a circle are perpendicular to the radius ending at the point of tangency.</p>				
<p>Level Criteria</p>	<p>Beginning Spend some extra time with the criteria and ask for help.</p>	<p>Approaching Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p>Proficient You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p>Mastery Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome SS9.1A Students will demonstrate an understanding of the properties of tangents to a circle</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I can determine the angle measure between a tangent and the radius to the point of tangency.</p>	<p>I can consistently find missing angles and sides in a diagram using the tangent radius angle property.</p>	<p>I can justify why a line is tangent to a circle is tangent to a circle at a specific point.</p>
<p>Outcome SS9.1B: Students will demonstrate an understanding of the properties of chords in a circle</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I can consistently use the property of a chord to find the length of one side of the chord given either the other side length of the length of the entire chord.</p>	<p>I can consistently solve using the property of chords for missing angles and sides in inscribed triangles.</p>	<p>I can demonstrate my understanding of chord properties by using these to locate the center of a circle. I can consistently extend my knowledge of inscribed right triangles to find additional measurements.</p>
<p>Outcome SS9.1C Students will demonstrate an understanding of the properties of angles in a circle</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I can consistently identify and find the measure of an inscribed angle and the central angle that subtend the same arc given one of the values.</p>	<p>I can consistently use the property of angles to solve for missing angles and sides.</p>	<p>I can demonstrate and explain the relationship between inscribed angles and the central angle subtended by the same arc.</p>

OUTCOMES	ASSESSMENT RUBRICS			
SS9.2 Extend understanding of area to surface area of right rectangular prisms, right cylinders, right triangular prisms, to composite 3D objects				
Level Criteria	Beginning Spend some extra time with the criteria and ask for help.	Approaching Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.	Proficient You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.	Mastery Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.
Outcome SS9.2: Students will determine the surface area of composite 3D objects to solve problems	I need more help with becoming consistent with the criteria.	I can consistently determine the surface area of right rectangular, triangular prisms and cylinders with given measurements.	I can consistently determine the surface area of composite 3D objects.	I can solve situational questions involving the surface area of composite 3D objects. I can demonstrate an understanding of surface area of composite 3D objects.

OUTCOMES	ASSESSMENT RUBRICS			
SS9.3 Demonstrate understanding of similarity 2D shapes				
<p>Level</p> <p>Criteria</p>	<p><u>Beginning</u> Spend some extra time with the criteria and ask for help.</p>	<p><u>Approaching</u> Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p><u>Proficient</u> You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p><u>Mastery</u> Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome SS9.3: Students will demonstrate understanding of similarity of 2D shapes</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I can determine if two shapes are similar. I can draw an enlargement/reduction given a shape and a scale factor.</p>	<p>I can consistently solve for all missing parts of similar 2D shapes. I can determine scale factor. I can draw an enlargement/reduction without a given scale factor. I can explain the difference between similarity and congruence.</p>	<p>I can solve situational questions and demonstrate my understanding involving similarity of 2D shapes.</p>

OUTCOMES	ASSESSMENT RUBRICS			
SS9.4 Demonstrate understanding of line and rotation symmetry				
<p>Level</p> <p>Criteria</p>	<p><u>Beginning</u> Spend some extra time with the criteria and ask for help.</p>	<p><u>Approaching</u> Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p><u>Proficient</u> You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p><u>Mastery</u> Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome SS9.4: Students will demonstrate an understanding of line and rotation symmetry given a diagram</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I can determine if a diagram has line and/or/no rotational symmetry about the center.</p>	<p>I can draw any lines of symmetry and I can state the order of rotation and the angle of rotation about the center of a diagram. I can analyze different transformations and tessellations of 2D shapes to identify any line or rotational symmetry. I can complete a 2-D shape or design given part of a shape or design and one or more lines of symmetry.</p>	<p>I can determine if a picture has line and/or rotational symmetry about a particular point outside the image.</p>

OUTCOMES	ASSESSMENT RUBRICS			
SP9.1 Demonstrate understanding of the effect of: bias, use of language, ethics, cost, time and timing, privacy, cultural sensitivity, population or sample on data collection				
<p>Level</p> <p>Criteria</p>	<p><u>Beginning</u></p> <p>Spend some extra time with the criteria and ask for help.</p>	<p><u>Approaching</u></p> <p>Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p><u>Proficient</u></p> <p>You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p><u>Mastery</u></p> <p>Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome SP9.1: Students will demonstrate understanding of the effect of: bias, use of language, ethics, cost, time and timing, privacy, cultural sensitivity, population or sample on data collection</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I am able to identify problems with survey questions that have been given to me.</p>	<p>I can discuss the significance of population and sample in situational questions.</p>	<p>I can explain how I considered each part and offer suggestions to improve the validity of the data collection.</p>

OUTCOMES	ASSESSMENT RUBRICS			
SP9.2 Demonstrate an understanding of the collection, display, and analysis of data through a project				
<p>Level</p> <p>Criteria</p>	<p><u>Beginning</u> Spend some extra time with the criteria and ask for help.</p>	<p><u>Approaching</u> Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p><u>Proficient</u> You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p><u>Mastery</u> Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome SP9.2: Students will demonstrate an understanding of the collection, display and analysis of data through a project</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I am able to carry out a collection of data from a survey question. I am able to organize my data and display a visual.</p>	<p>I am able to analyze my data on a superficial level.</p>	<p>I am able to carry out a collection of data from a survey question. I am able to organize my data visually. I am able to analyze my data and make an appropriate conclusion about my results. I can make recommendations due to my analysis. I will be able to assess my project through a rubric I created.</p>

OUTCOMES	ASSESSMENT RUBRICS			
SP9.3 Demonstrate an understanding of the role of probability in society				
<p>Level</p> <p>Criteria</p>	<p><u>Beginning</u> Spend some extra time with the criteria and ask for help.</p>	<p><u>Approaching</u> Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p><u>Proficient</u> You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p><u>Mastery</u> Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome SP9.3: Students will demonstrate an understanding of the role of probability in society</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I am able to identify experimental, theoretical and subjective probability.</p>	<p>I am able to explain why the person based their prediction on experimental probability, theoretical probability or subjective judgment.</p>	<p>I can analyze the meaningfulness of a probability against the limitations of assumptions associated with that probability. I can provide examples of how a single probability could be used to support opposing positions.</p>

OUTCOMES	ASSESSMENT RUBRICS			
SP9.4 Research and present how First Nations and metis people, past and present envision, represent, and make use of probability and statistics				
<p>Level</p> <p>Criteria</p>	<p><u>Beginning</u> Spend some extra time with the criteria and ask for help.</p>	<p><u>Approaching</u> Good start. You are beginning to make sense of this on your own. You are consistent with the basic learning goals for this outcome.</p>	<p><u>Proficient</u> You did it and you did it on your own. You are able to complete the processes for this outcome. Your work is thorough and consistently accurate.</p>	<p><u>Mastery</u> Great work! This is going extra well for you. You have understood the outcome, are able to explain your strategies and apply these to situations. Your work is always accurate.</p>
<p>Outcome SP9.4: Students will demonstrate an understanding of how First Nations and Metis peoples, past and present, envision, represent, and make use of probability and statistics</p>	<p>I need more help with becoming consistent with the criteria.</p>	<p>I know that probability and statistics play a part in First Nations Culture.</p>	<p>I can give an example of probability or statistics in First Nations Culture.</p>	<p>I can describe how probability and statistics play a part in First Nations Culture</p>