

# CAT-4 Match to the British Columbia Curriculum

Level 19 to Grade 9

<b>Reading</b> British Columbia Curriculum, 2007 Specific Outcomes	Canadian Achievement Tests, Fourth Edition (CAT-4)		
	Multiple-Choice Tests		Constructed-Response Tasks
	Reading	Vocabulary	Response to Text
<b>Purposes (Reading and Viewing)</b>			
B1 read, both collaboratively and independently, to comprehend a variety of literary texts, including <ul style="list-style-type: none"> <li>• literature reflecting a variety of times, places, and perspectives</li> <li>• literature reflecting a variety of prose forms</li> <li>• poetry in a variety of narrative and lyric forms</li> <li>• significant works of Canadian literature (e.g., the study of plays, short stories, poetry, or novels)</li> <li>• traditional forms from Aboriginal and other cultures</li> <li>• student-generated material</li> </ul>	10		
B2 read, both collaboratively and independently, to comprehend a variety of information and persuasive texts with increasing complexity of ideas and form, such as <ul style="list-style-type: none"> <li>• articles and reports</li> <li>• biographies and autobiographies</li> <li>• textbooks, magazines, and newspapers</li> <li>• print and electronic reference material</li> <li>• advertising and promotional material</li> <li>• opinion-based material</li> <li>• student-generated material</li> </ul>			
B3 view, both collaboratively and independently, to comprehend a variety of visual texts, such as <ul style="list-style-type: none"> <li>• broadcast media</li> <li>• web sites</li> <li>• graphic novels</li> <li>• film and video</li> <li>• photographs</li> <li>• art</li> <li>• visual components of print media</li> <li>• student-generated material</li> </ul>			
B3 view, both collaboratively and independently, to comprehend a variety of visual texts, such as <ul style="list-style-type: none"> <li>• broadcast media</li> <li>• web sites</li> <li>• graphic novels</li> <li>• film and video</li> <li>• photographs</li> <li>• art</li> <li>• visual components of print media</li> <li>• student-generated material</li> </ul>	22		
B4 independently select and read, for sustained periods of time, texts for enjoyment and to increase fluency			

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<b>Strategies (Reading and Viewing)</b>			
B5 before reading and viewing, select and use a range of strategies to anticipate content and construct meaning, including <ul style="list-style-type: none"> <li>• interpreting a task</li> <li>• setting a purpose</li> <li>• accessing prior knowledge</li> <li>• making logical predictions</li> <li>• generating guiding questions</li> </ul>	18		
B6 during reading and viewing, select and use a range of strategies to construct, monitor, and confirm meaning, including <ul style="list-style-type: none"> <li>• predicting, questioning, visualizing, and making connections</li> <li>• making inferences and drawing conclusions</li> <li>• differentiating main ideas and supporting details</li> <li>• summarizing</li> <li>• using text features</li> <li>• determining the meaning of unknown words and phrases</li> <li>• self-monitoring and self-correcting</li> </ul>	2, 4, 11, 13, 15, 20, 23, 28, 30, 48		
B7 after reading and viewing, select and use a range of strategies to extend and confirm meaning, including <ul style="list-style-type: none"> <li>• responding to text</li> <li>• asking questions</li> <li>• reviewing text and purpose for reading</li> <li>• making inferences and drawing conclusions</li> <li>• summarizing, synthesizing, and applying ideas</li> </ul>	1, 3, 9, 14, 17, 21, 24, 27, 31, 35, 43		
<b>Thinking (Reading and Viewing)</b>			
B8 explain and support personal responses to texts, by <ul style="list-style-type: none"> <li>• making connections with prior knowledge and experiences</li> <li>• describing reactions and emotions</li> <li>• generating thoughtful questions</li> <li>• offering and supporting opinions using evidence</li> </ul>	5, 8, 16, 19, 25, 34, 45		
B9 interpret, analyse, and evaluate ideas and information from texts, by <ul style="list-style-type: none"> <li>• making and supporting judgments</li> <li>• examining and comparing ideas and elements within and among texts</li> <li>• beginning to identify diverse voices</li> <li>• identifying bias, contradictions, and non-represented perspectives</li> </ul>	6, 7, 26, 32, 40, 44, 46		
B10 synthesize and extend thinking about texts, by <ul style="list-style-type: none"> <li>• personalizing ideas and information</li> <li>• explaining relationships among ideas and information</li> <li>• applying new ideas and information</li> <li>• transforming existing ideas and information</li> </ul>	41, 47		

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	Multiple-Choice Tests		Constructed-Response Tasks
	Reading	Vocabulary	Response to Text
B11 use metacognitive strategies to reflect on and assess their reading and viewing, by <ul style="list-style-type: none"> <li>referring to criteria</li> <li>setting goals for improvement</li> <li>creating a plan for achieving goals</li> <li>evaluating progress and setting new goals</li> </ul>			
<b>Features (Reading and Viewing)</b>			
B12 recognize and explain how structures and features of text shape readers' and viewers' construction of meaning, including <ul style="list-style-type: none"> <li>form and genre</li> <li>functions of text</li> <li>literary elements</li> <li>literary devices</li> <li>use of language</li> <li>non-fiction elements</li> <li>visual/artistic devices</li> </ul>	29, 33, 37, 39		
B13 demonstrate increasing word skills and vocabulary knowledge, by <ul style="list-style-type: none"> <li>analysing the origins and roots of words</li> <li>determining meanings and uses of words based on context</li> <li>identifying, selecting, and using appropriate academic and technical language</li> <li>using vocabulary appropriate to audience and purpose</li> </ul>	12, 36, 38, 42	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40	

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<b>Writing</b> British Columbia Curriculum, 2007 Specific Outcomes	Canadian Achievement Tests, Fourth Edition (CAT-4)		
	Multiple-Choice Tests		Constructed-Response Tasks
	Writing Conventions	Spelling	Writing
<b>Purposes (Writing and Representing)</b>			
C1 write meaningful personal texts that explore ideas and information to <ul style="list-style-type: none"> <li>• experiment</li> <li>• express self</li> <li>• make connections</li> <li>• reflect and respond</li> <li>• remember and recall</li> </ul>			
C2 write purposeful information texts that express ideas and information to <ul style="list-style-type: none"> <li>• explore and respond</li> <li>• record and describe</li> <li>• analyse and explain</li> <li>• persuade</li> <li>• engage</li> </ul>			
C3 write effective imaginative texts to explore ideas and information to <ul style="list-style-type: none"> <li>• make connections and develop insights</li> <li>• explore literary forms and techniques</li> <li>• experiment with language and style</li> <li>• engage and entertain</li> </ul>			
C4 create thoughtful representations that communicate ideas and information to <ul style="list-style-type: none"> <li>• explore and respond</li> <li>• record and describe</li> <li>• explain and persuade</li> <li>• engage</li> </ul>			
<b>Strategies (Writing and Representing)</b>			
C5 select and use a range of strategies to generate, develop, and organize ideas for writing and representing, including <ul style="list-style-type: none"> <li>• making connections</li> <li>• setting a purpose and considering audience</li> <li>• gathering and summarizing ideas from personal interest, knowledge, and inquiry</li> <li>• analysing writing samples or models</li> <li>• setting class-generated criteria</li> </ul>			
C6 select and use a range of drafting and composing strategies while writing and representing, including <ul style="list-style-type: none"> <li>• using a variety of sources to collect ideas and information</li> <li>• generating text</li> <li>• organizing ideas and information</li> <li>• analysing writing samples or models</li> <li>• creating and consulting criteria</li> </ul>			
C7 select and use a range of strategies to revise, edit, and publish writing and representing, including <ul style="list-style-type: none"> <li>• checking work against established criteria</li> <li>• enhancing supporting details and examples</li> <li>• refining specific aspects and features of text</li> <li>• proofreading</li> </ul>	28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40		

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	Multiple-Choice Tests		Constructed-Response Tasks
	Writing Conventions	Spelling	Writing
<b>Thinking (Writing and Representing)</b>			
C8 write and represent to explain and support personal responses to texts, by <ul style="list-style-type: none"> <li>making connections with prior knowledge and experiences</li> <li>describing reactions and emotions</li> <li>generating thoughtful questions</li> <li>developing opinions using evidence</li> </ul>			
C9 write and represent to interpret, analyse, and evaluate ideas and information from texts, by <ul style="list-style-type: none"> <li>making and supporting judgments</li> <li>examining and comparing ideas and elements within and among texts</li> <li>identifying diverse points of view</li> <li>identifying bias, contradictions, and non-represented perspectives</li> </ul>			
C10 write and represent to synthesize and extend thinking, by <ul style="list-style-type: none"> <li>personalizing ideas and information</li> <li>explaining relationships among ideas and information</li> <li>applying new ideas and information</li> <li>transforming existing ideas and information</li> </ul>			
C11 use metacognitive strategies to reflect on and assess their writing and representing, by <ul style="list-style-type: none"> <li>relating their work to criteria</li> <li>setting goals for improvement</li> <li>creating a plan for achieving goals</li> <li>evaluating progress and setting new goals</li> </ul>			
<b>Features (Writing and Representing)</b>			
C12 use and experiment with elements of style in writing and representing, appropriate to purpose and audience, to enhance meaning and artistry, including <ul style="list-style-type: none"> <li>syntax and sentence fluency</li> <li>diction</li> <li>point of view</li> <li>literary devices</li> <li>visual/artistic devices</li> </ul>	20, 21, 22, 23, 24, 25, 26, 27		
C13 use and experiment with elements of form in writing and representing, appropriate to purpose and audience, to enhance meaning and artistry, including <ul style="list-style-type: none"> <li>organization of ideas and information</li> <li>text features and visual/artistic devices</li> </ul>			
C14 use conventions in writing and representing, appropriate to purpose and audience, to enhance meaning and artistry, including <ul style="list-style-type: none"> <li>grammar and usage</li> <li>punctuation, capitalization, and Canadian spelling</li> <li>copyright and citation of references</li> <li>presentation/layout</li> </ul>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30	

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Mathematics British Columbia Curriculum	Canadian Achievement Tests, Fourth Edition (CAT-4)		
	Multiple-Choice Tests		Constructed-Response Tasks
	Mathematics	Computation	Math Processes
<b>Number</b>			
<p>A1 demonstrate an understanding of powers with integral bases (excluding base 0) and whole number exponents by</p> <ul style="list-style-type: none"> <li>- representing repeated multiplication using powers</li> <li>- using patterns to show that a power with an exponent of zero is equal to one</li> <li>- solving problems involving powers</li> </ul> <p>[C, CN, PS, R]</p> <ul style="list-style-type: none"> <li>• demonstrate the differences between the exponent and the base by building models of a given power, such as <math>2^3</math> and <math>3^3</math></li> <li>• explain, using repeated multiplication, the difference between two given powers in which the exponent and base are interchanged (e.g., <math>10^3</math> and <math>3^{10}</math>)</li> <li>• express a given power as a repeated multiplication</li> <li>• express a given repeated multiplication as a power</li> <li>• explain the role of parentheses in powers by evaluating a given set of powers (e.g., <math>(-2)^4</math>, <math>(-2^4)</math> and <math>-2^4</math>)</li> <li>• demonstrate, using patterns, that <math>a^0</math> is equal to 1 for a given value of <math>a</math> (<math>a \neq 0</math>)</li> <li>• evaluate powers with integral bases (excluding base 0) and whole number exponents</li> </ul>		4, 19, 34	
<p>A2 demonstrate an understanding of operations on powers with integral bases (excluding base 0) and whole number exponents</p> <p>[C, CN, PS, R, T]</p> <ul style="list-style-type: none"> <li>• explain, using examples, the exponent laws of powers with integral bases (excluding base 0) and whole number exponents:</li> </ul> <ul style="list-style-type: none"> <li>- <math>(a^m)(a^n) = a^{m+n}</math></li> <li>- <math>a^m + a^n = a^{m+n}</math>, <math>m &gt; n</math></li> <li>- <math>(a^m)^n = a^{mn}</math></li> <li>- <math>(ab)^m = a^m b^m</math></li> <li>- <math>\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}</math>, <math>b \neq 0</math></li> </ul> <ul style="list-style-type: none"> <li>• evaluate a given expression by applying the exponent laws</li> <li>• determine the sum of two given powers (e.g., <math>5^2 + 5^3</math>) and record the process</li> <li>• determine the difference of two given powers (e.g., <math>4^3 - 4^2</math>) and record the process</li> <li>• identify the error(s) in a given simplification of an expression involving powers</li> </ul>	42, 43	18, 20, 31	

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Mathematics British Columbia Curriculum	Canadian Achievement Tests, Fourth Edition (CAT-4)		
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	Mathematics	Computation	Math Processes
<p>A3 demonstrate an understanding of rational numbers by</p> <ul style="list-style-type: none"> <li>- comparing and ordering rational numbers</li> <li>- solving problems that involve arithmetic operations on rational numbers</li> </ul> <p>[C, CN, PS, R, T, V]</p> <ul style="list-style-type: none"> <li>• order a given set of rational numbers, in fraction and decimal form, by placing them on a number line (e.g., <math>\frac{3}{5}</math>, -0.666..., 0.5, <math>-\frac{5}{8}</math>)</li> <li>• identify a rational number that is between two given rational numbers</li> <li>• solve a given problem involving operations on rational numbers in fraction form and decimal form</li> </ul>		2, 9, 13, 25	
<p>A4 explain and apply the order of operations, including exponents, with and without technology</p> <p>[PS, T]</p> <ul style="list-style-type: none"> <li>• solve a given problem by applying the order of operations without the use of technology</li> <li>• solve a given problem by applying the order of operations with the use of technology</li> <li>• identify the error in applying the order of operations in a given incorrect solution</li> </ul>		7, 8, 11, 13, 23, 24, 27, 29, 33, 36	
<p>A5 determine the square root of positive rational numbers that are perfect squares</p> <p>[C, CN, PS, R, T]</p> <ul style="list-style-type: none"> <li>• determine whether or not a given rational number is a square number and explain the reasoning</li> <li>• determine the square root of a given positive rational number that is a perfect square</li> <li>• identify the error made in a given calculation of a square root (e.g., Is 3.2 the square root of 6.4?)</li> <li>• determine a positive rational number given the square root of that positive rational number</li> </ul>		10	
<p>A6 determine an approximate square root of positive rational numbers that are non-perfect squares</p> <p>[C, CN, PS, R, T]</p> <ul style="list-style-type: none"> <li>• estimate the square root of a given rational number that is not a perfect square, using the roots of perfect squares as benchmarks</li> <li>• determine an approximate square root of a given rational number that is not a perfect square using technology (e.g., calculator, computer)</li> <li>• explain why the square root of a given rational number as shown on a calculator may be an approximation</li> <li>• identify a number with a square root that is between two given numbers</li> </ul>			
Foundational Number Skills	11, 13, 57	1, 3, 12, 14, 15, 16, 17, 21, 22, 28	

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	Mathematics	Computation	Math Processes
<b>Patterns and Relations</b>			
<p>B1 generalize a pattern arising from a problem-solving context using linear equations and verify by substitution [C, CN, PS, R, V]</p> <ul style="list-style-type: none"> <li>• write an expression representing a given pictorial, oral, or written pattern</li> <li>• write a linear equation to represent a given context</li> <li>• describe a context for a given linear equation</li> <li>• solve, using a linear equation, a given problem that involves pictorial, oral, and written linear patterns</li> <li>• write a linear equation representing the pattern in a given table of values and verify the equation by substituting values from the table</li> </ul>	7, 8, 9, 12, 15, 23, 25, 29, 31, 45, 47, 53, 54		
<p>B2 graph linear relations, analyse the graph, and interpolate or extrapolate to solve problems [C, CN, PS, R, T, V]</p> <ul style="list-style-type: none"> <li>• describe the pattern found in a given graph</li> <li>• graph a given linear relation, including horizontal and vertical lines</li> <li>• match given equations of linear relations with their corresponding graphs</li> <li>• extend a given graph (extrapolate) to determine the value of an unknown element</li> <li>• interpolate the approximate value of one variable on a given graph given the value of the other variable</li> <li>• extrapolate the approximate value of one variable from a given graph given the value of the other variable</li> <li>• solve a given problem by graphing a linear relation and analysing the graph</li> </ul>	3, 6, 17, 22, 27, 37, 38, 41, 56, 58, 59		
<p>B3 model and solve problems using linear equations of the form</p> <ul style="list-style-type: none"> <li>- <math>ax = b</math></li> <li>- <math>\frac{x}{a} = b, a \neq 0</math></li> <li>- <math>ax + b = c</math></li> <li>- <math>\frac{x}{a} + b = c, a \neq 0</math></li> <li>- <math>ax = b + cx</math></li> <li>- <math>a(x + b) = c</math></li> <li>- <math>ax + b = cx + d</math></li> <li>- <math>a(bx + c) = d(ex + f)</math></li> <li>- <math>\frac{a}{x} = b, x \neq 0</math></li> </ul> <p>where <math>a, b, c, d, e,</math> and <math>f</math> are rational numbers [C, CN, PS, V]</p> <ul style="list-style-type: none"> <li>• model the solution of a given linear equation using concrete or pictorial representations, and record the process</li> <li>• determine, by substitution, whether a given rational number is a solution to a given linear equation</li> <li>• solve a given linear equation symbolically</li> <li>• identify and correct an error in a given incorrect solution of a linear equation</li> <li>• represent a given problem using a linear equation</li> <li>• solve a given problem using a linear equation and record the process</li> </ul>	4, 5, 14, 18, 35	5, 6, 25, 32, 35	

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	Mathematics	Computation	Math Processes
<p>B4 explain and illustrate strategies to solve single variable linear inequalities with rational coefficients within a problem-solving context [C, CN, PS, R, V]</p> <ul style="list-style-type: none"> <li>• translate a given problem into a single variable linear inequality using the symbols <math>, &gt;, &lt;</math> or</li> <li>• determine if a given rational number is a possible solution of a given linear inequality</li> <li>• generalize and apply a rule for adding or subtracting a positive or negative number to determine the solution of a given inequality</li> <li>• generalize and apply a rule for multiplying or dividing by a positive or negative number to determine the solution of a given inequality</li> <li>• solve a given linear inequality algebraically and explain the process orally or in written form</li> <li>• compare and explain the process for solving a given linear equation to the process for solving a given linear inequality</li> <li>• graph the solution of a given linear inequality on a number line</li> <li>• compare and explain the solution of a given linear equation to the solution of a given linear inequality</li> <li>• verify the solution of a given linear inequality using substitution for multiple elements in the solution</li> <li>• solve a given problem involving a single variable linear inequality and graph the solution</li> </ul>			
<p>B5 demonstrate an understanding of polynomials (limited to polynomials of degree less than or equal to 2) [C, CN, R, V]</p> <ul style="list-style-type: none"> <li>• create a concrete model or a pictorial representation for a given polynomial expression</li> <li>• write the expression for a given model of a polynomial</li> <li>• identify the variables, degree, number of terms, and coefficients, including the constant term, of a given simplified polynomial expression</li> <li>• describe a situation for a given first degree polynomial expression</li> <li>• match equivalent polynomial expressions given in simplified form (e.g., <math>4x - 3x^2 + 2</math> is equivalent to <math>-3x^2 + 4x + 2</math>)</li> </ul>	44		

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	Mathematics	Computation	Math Processes
<p>B6 model, record, and explain the operations of addition and subtraction of polynomial expressions, concretely, pictorially, and symbolically (limited to polynomials of degree less than or equal to 2) [C, CN, PS, R, V]</p> <ul style="list-style-type: none"> <li>• model addition of two given polynomial expressions concretely or pictorially and record the process symbolically</li> <li>• model subtraction of two given polynomial expressions concretely or pictorially and record the process symbolically</li> <li>• apply a personal strategy for addition and subtraction of given polynomial expressions, and record the process symbolically</li> <li>• identify equivalent polynomial expressions from a given set of polynomial expressions, including pictorial and symbolic representations</li> <li>• identify the error(s) in a given simplification of a given polynomial expression</li> </ul>	45, 52		
<p>B7 model, record, and explain the operations of multiplication and division of polynomial expressions (limited to polynomials of degree less than or equal to 2) by monomials, concretely, pictorially, and symbolically [C, CN, R, V]</p>	49, 50		
Foundational Patterning and Algebra	14, 24, 40, 46		
Shape and Space			
<p>C1 solve problems and justify the solution strategy using circle properties, including</p> <ul style="list-style-type: none"> <li>- the perpendicular from the centre of a circle to a chord bisects the chord</li> <li>- the measure of the central angle is equal to twice the measure of the inscribed angle subtended by the same arc</li> <li>- the inscribed angles subtended by the same arc are congruent</li> <li>- a tangent to a circle is perpendicular to the radius at the point of tangency</li> </ul> <p>[C, CN, PS, R, T, V]</p> <ul style="list-style-type: none"> <li>• provide an example that illustrates               <ul style="list-style-type: none"> <li>- the perpendicular from the centre of a circle to a chord bisects the chord</li> <li>- the measure of the central angle is equal to twice the measure of the inscribed angle subtended by the same arc</li> <li>- the inscribed angles subtended by the same arc are congruent</li> <li>- a tangent to a circle is perpendicular to the radius at the point of tangency</li> </ul> </li> <li>• solve a given problem involving application of one or more of the circle properties</li> <li>• explain the relationship among the centre of a circle, a chord, and the perpendicular bisector of the chord</li> </ul>	30		

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	Mathematics	Computation	Math Processes
<p>C2 determine the surface area of composite 3-D objects to solve problems [C, CN, PS, R, V]</p> <ul style="list-style-type: none"> <li>determine the area of overlap in a given concrete composite 3-D object, and explain its effect on determining the surface area (limited to right cylinders, right rectangular prisms, and right triangular prisms)</li> <li>determine the surface area of a given concrete composite 3-D object (limited to right cylinders, right rectangular prisms, and right triangular prisms)</li> <li>solve a given problem involving surface area</li> </ul>	10, 26, 51		
<p>C3 demonstrate an understanding of similarity of polygons [C, CN, PS, R, V]</p> <ul style="list-style-type: none"> <li>determine if the polygons in a given pre-sorted set are similar and explain the reasoning</li> <li>draw a polygon similar to a given polygon and explain why the two are similar</li> <li>solve a given problem using the properties of similar polygons</li> </ul>			
<p>C4 draw and interpret scale diagrams of 2-D shapes [CN, R, T, V]</p> <ul style="list-style-type: none"> <li>identify an example in print and electronic media (e.g., newspapers, the internet) of a scale diagram and interpret the scale factor</li> <li>draw a diagram to scale that represents an enlargement or reduction of a given 2-D shape</li> <li>determine the scale factor for a given diagram drawn to scale</li> <li>determine if a given diagram is proportional to the original 2-D shape and, if it is, state the scale factor</li> <li>solve a given problem that involves a scale diagram by applying the properties of similar triangles</li> </ul>			

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	Multiple-Choice Tests		Constructed-Response Tasks
	Mathematics	Computation	Math Processes
<p>C5 demonstrate an understanding of line and rotation symmetry [C, CN, PS, V]</p> <ul style="list-style-type: none"> <li>• classify a given set of 2-D shapes or designs according to the number of lines of symmetry</li> <li>• complete a 2-D shape or design given one half of the shape or design and a line of symmetry</li> <li>• determine if a given 2-D shape or design has rotation symmetry about the point at the center of the shape or design and, if it does, state the order and angle of rotation</li> <li>• rotate a given 2-D shape about a vertex and draw the resulting image</li> <li>• identify a line of symmetry or the order and angle or rotation symmetry in a given tessellation</li> <li>• identify the type of symmetry that arises from a given transformation on the Cartesian plane</li> <li>• complete, concretely or pictorially, a given transformation of a 2-D shape on a Cartesian plane, record the coordinates, and describe the type of symmetry that results</li> <li>• identify and describe the types of symmetry created in a given piece of artwork</li> <li>• determine whether or not two given 2-D shapes on the Cartesian plane are related by either rotation or line symmetry</li> <li>• draw, on a Cartesian plane, the translation image of a given shape using a given translation rule, such as R2, U3, or <math>\rightarrow \rightarrow</math>, <math>\uparrow \uparrow \uparrow</math>, label each vertex and its corresponding ordered pair, and describe why the translation does not result in line or rotation symmetry</li> <li>• create or provide a piece of artwork that demonstrates line and rotation symmetry, and identify the line(s) of symmetry and the order and angle of rotation</li> </ul>			
Foundational Shape and Space	1, 2, 16, 19, 30, 32, 33, 34, 39, 48, 55		
Statistics and Probability			
<p>D1 describe the effect of</p> <ul style="list-style-type: none"> <li>- bias</li> <li>- use of language</li> <li>- ethics</li> <li>- cost</li> <li>- time and timing</li> <li>- privacy</li> <li>- cultural sensitivity on the collection of data</li> </ul> <p>[C, CN, R, T]</p> <ul style="list-style-type: none"> <li>• analyse a given case study of data collection, and identify potential problems related to bias, use of language, ethics, cost, time and timing, privacy, or cultural sensitivity</li> <li>• provide examples to illustrate how bias, use of language, ethics, cost, time and timing, privacy, or cultural sensitivity may influence the data</li> </ul>	20, 28		

# CAT-4 Match to the British Columbia Curriculum

Level 19 to Grade 9

Mathematics British Columbia Curriculum	Canadian Achievement Tests, Fourth Edition (CAT-4)		
	Multiple-Choice Tests		Constructed-Response Tasks
	Mathematics	Computation	Math Processes
<p>D2 select and defend the choice of using either a population or a sample of a population to answer a question [C, CN, PS, R]</p> <ul style="list-style-type: none"> <li>• identify whether a given situation represents the use of a sample or a population</li> <li>• provide an example of a situation in which a population may be used to answer a question and justify the choice</li> <li>• provide an example of a question where a limitation precludes the use of a population and describe the limitation (e.g., too costly, not enough time, limited resources)</li> <li>• identify and critique a given example in which a generalization from a sample of a population may or may not be valid for the population</li> </ul>			
<p>D3 develop and implement a project plan for the collection, display, and analysis of data by</p> <ul style="list-style-type: none"> <li>- formulating a question for investigation</li> <li>- choosing a data collection method that includes social considerations</li> <li>- selecting a population or a sample</li> <li>- collecting the data</li> <li>- displaying the collected data in an appropriate manner</li> <li>- drawing conclusions to answer the question</li> </ul> <p>[C, PS, R, T, V]</p> <ul style="list-style-type: none"> <li>• create a rubric to assess a project that includes the assessment of               <ul style="list-style-type: none"> <li>- a question for investigation</li> <li>- the choice of a data collection method that includes social considerations</li> <li>- the selection of a population or a sample and justifying the choice</li> <li>- the display of the collected data</li> <li>- the conclusions to answer the question</li> </ul> </li> <li>• develop a project plan that describes               <ul style="list-style-type: none"> <li>- a question for investigation</li> <li>- the method of data collection that includes social considerations</li> <li>- the method for selecting a population or a sample</li> <li>- the method to be used for collection of the data</li> <li>- the methods for analysis and display of the data</li> </ul> </li> <li>• complete the project according to the plan, draw conclusions, and communicate findings to an audience</li> <li>• self-assess the completed project by applying the rubric</li> </ul>	21, 37, 38		

# CAT-4 Match to the British Columbia Curriculum

Level 19 to Grade 9

Mathematics British Columbia Curriculum	Canadian Achievement Tests, Fourth Edition (CAT-4)		
	Multiple-Choice Tests		Constructed-Response Tasks
	Mathematics	Computation	Math Processes
D4 demonstrate an understanding of the role of probability in society [C, CN, R, T] <ul style="list-style-type: none"> <li>• provide an example from print and electronic media (e.g., newspapers and the Internet), where probability is used</li> <li>• identify the assumptions associated with a given probability and explain the limitations of each assumption</li> <li>• explain how a single probability can be used to support opposing positions</li> <li>• explain, using examples, how decisions based on probability may be a combination of theoretical probability, experimental probability, and subjective judgment</li> </ul>	36		
Foundational Data Management	60		