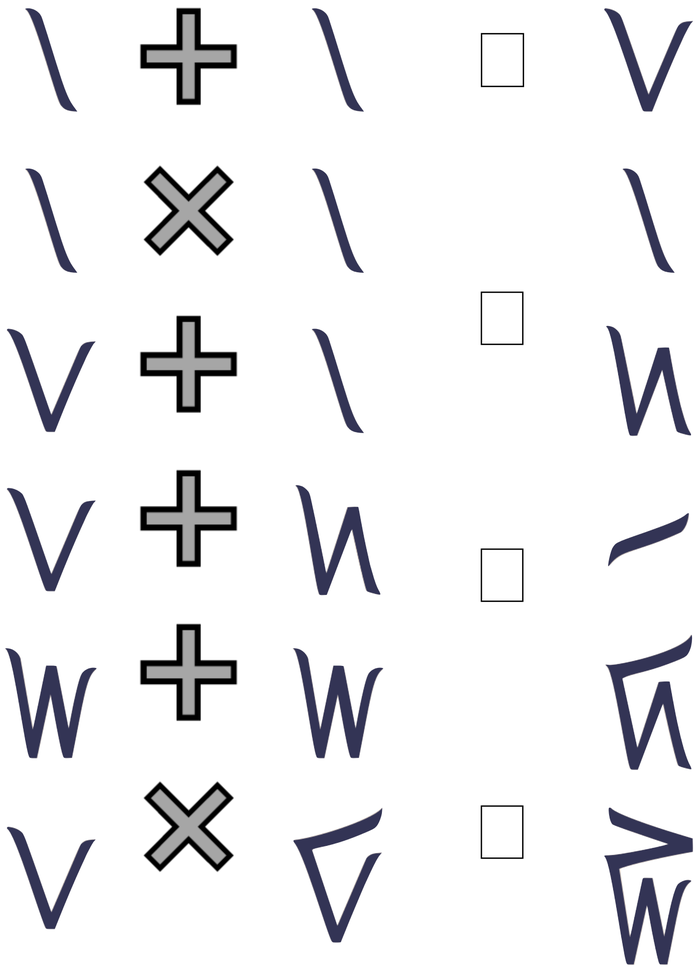
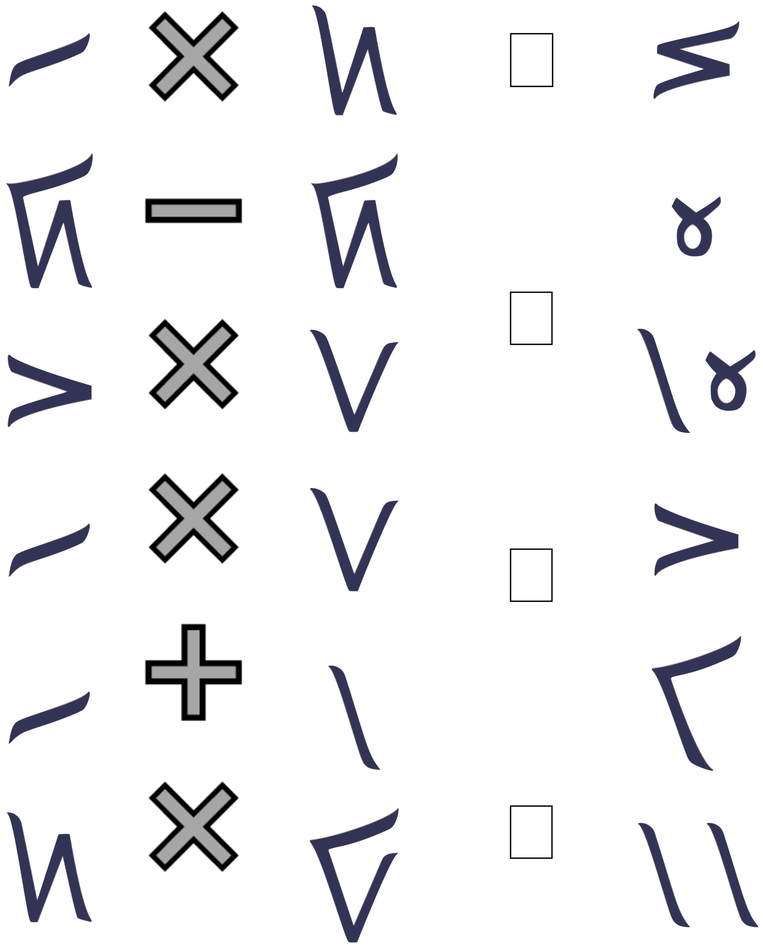
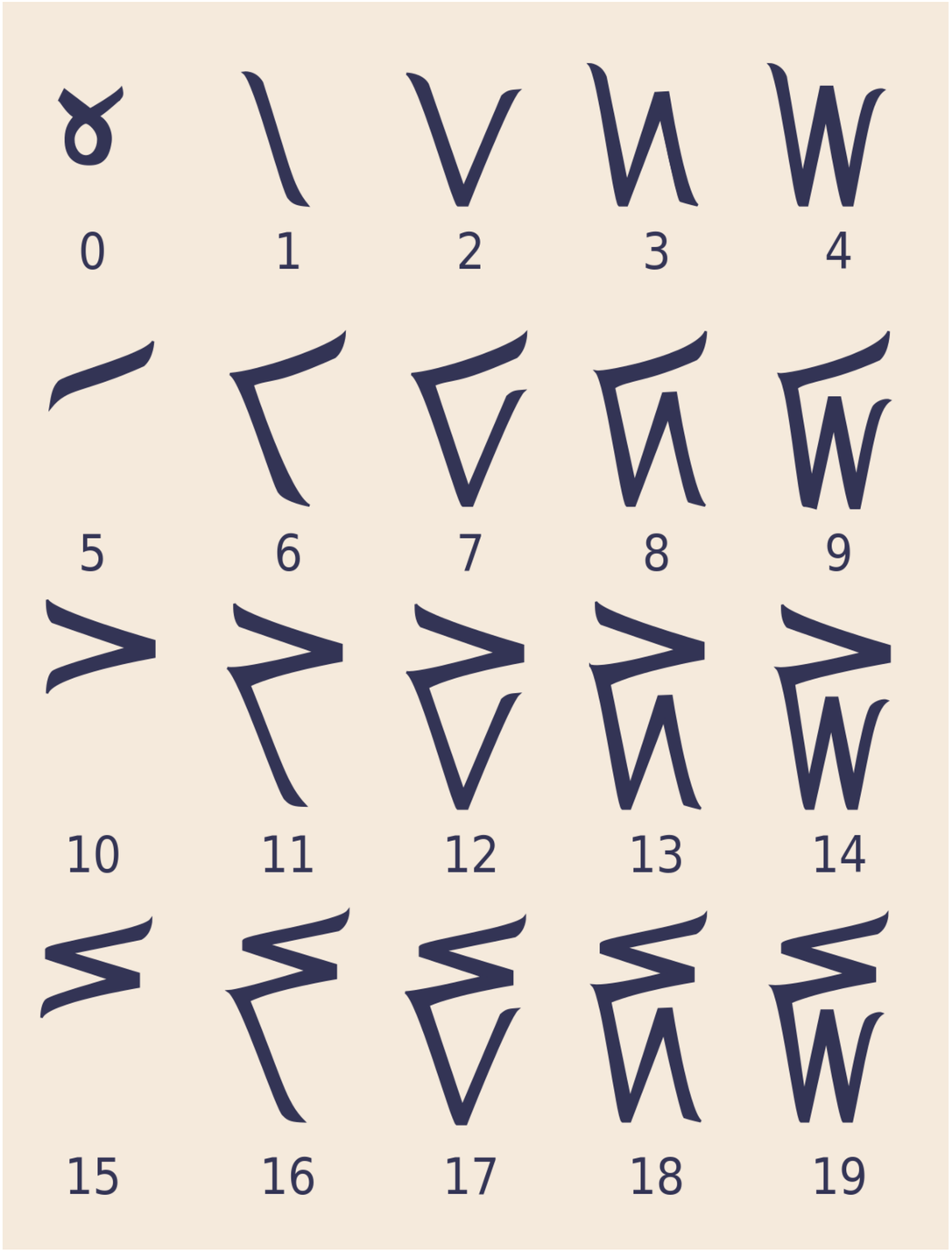
Kaktovik Iñupiaq Numerals

Using the clues, determine as many of the Kaktovik numerals from 0 to 19 as you can.






0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19

akimiaq

pinasut

akimiaq pinasut

FIRST PEOPLES

PRINCIPLES OF LEARNING

Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.

Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).

Learning involves recognizing the consequences of one's actions.

Learning involves generational roles and responsibilities.

Learning recognizes the role of indigenous knowledge.

Learning is embedded in memory, history, and story.

Learning involves patience and time.

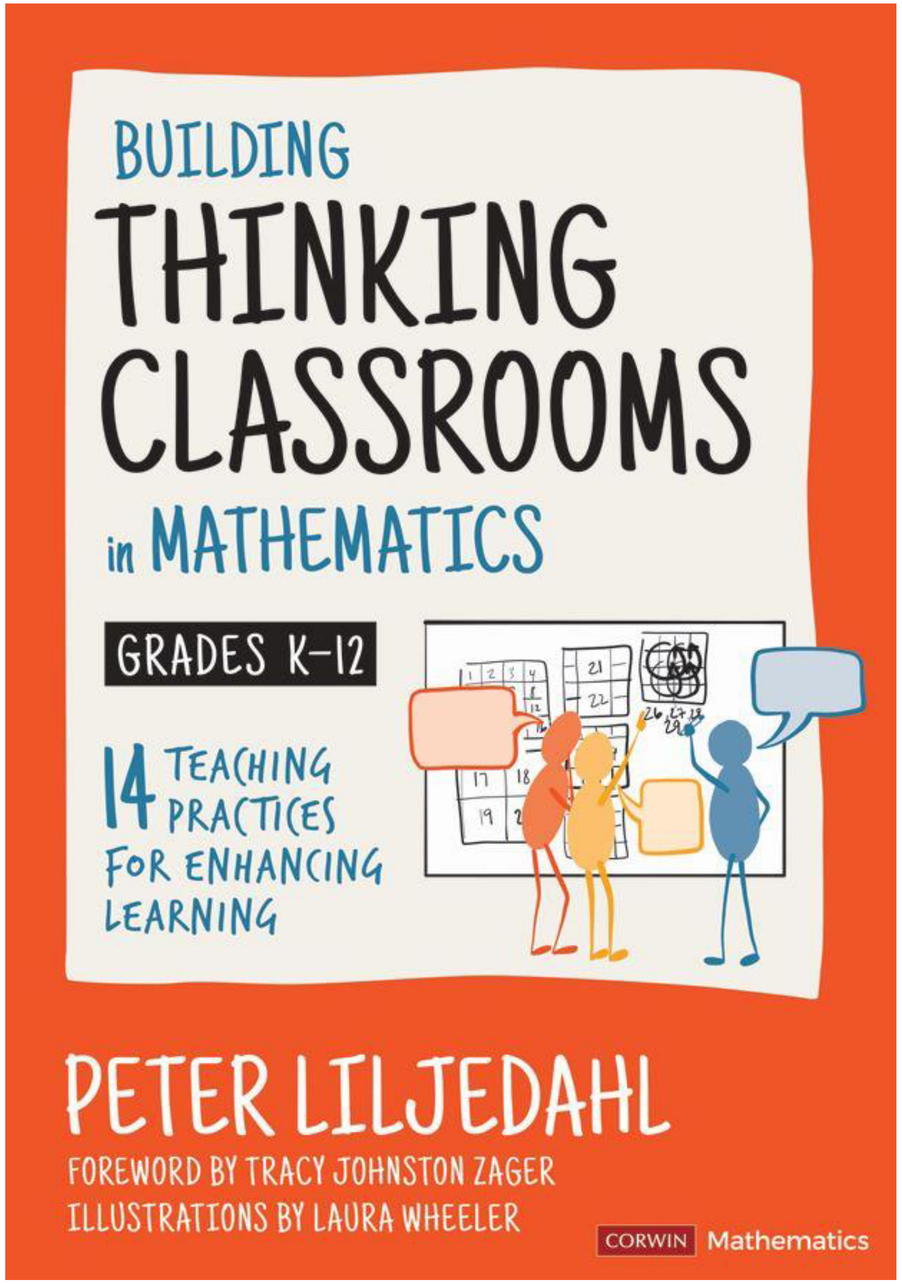
Learning requires exploration of one's identity.

Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.

For First Peoples classroom resources visit: www.fnesc.ca

fnesc

ENGLISH


BUILDING
THINKING CLASSROOMS
in MATHEMATICS
GRADES K–12
14 TEACHING PRACTICES FOR ENHANCING LEARNING
PETER LILJEDAHL
FOREWORD BY TRACY JOHNSTON ZAGER
ILLUSTRATIONS BY LAURA WHEELER
CORWIN Mathematics

BIG IDEAS

Using **inverses** is the foundation of solving equations and can be extended to relationships between functions.	Understanding the characteristics of families of **functions** allows us to model and understand relationships and to build connections between classes of functions.	**Transformations** of shapes extend to functions and relations in all of their representations.

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Reasoning and modelling** • Develop **thinking strategies** to solve puzzles and play games • Explore, **analyze**, and apply mathematical ideas using **reason**, **technology**, and **other tools** • **Estimate reasonably** and demonstrate **fluent, flexible, and strategic** thinking about number • **Model** with mathematics in **situational contexts** • **Think creatively** and with **curiosity and wonder** when exploring problems **Understanding and solving** • Develop, demonstrate, and apply conceptual understanding of mathematical ideas through play, story, **inquiry**, and problem solving • **Visualize** to explore and illustrate mathematical concepts and relationships • Apply **flexible and strategic approaches** to **solve problems** • Solve problems with **persistence and a positive disposition** • Engage in problem-solving experiences **connected** with place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures	*Students are expected to know the following:* • **transformations** of functions and relations • **exponential** functions and equations • **geometric** sequences and series • **logarithms:** operations, functions, and equations • **polynomial** functions and equations • **rational** functions • **trigonometry:** functions, equations, and identities

Learning Standards (continued)

Curricular Competencies	Content
Communicating and representing • **Explain and justify** mathematical ideas and **decisions** in **many ways** • **Represent** mathematical ideas in concrete, pictorial, and symbolic forms • Use mathematical vocabulary and language to contribute to **discussions** in the classroom • Take risks when offering ideas in classroom **discourse** **Connecting and reflecting** • **Reflect** on mathematical thinking • **Connect mathematical concepts** with each other, other areas, and personal interests • Use **mistakes** as **opportunities to advance learning** • **Incorporate** First Peoples worldviews, perspectives, **knowledge**, and **practices** to make connections with mathematical concepts	

Proficiency Scale	Emerging	Developing	Proficient	Extending
	The student demonstrates an initial understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a partial understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a complete understanding of the concepts and competencies relevant to the expected learning.	The student demonstrates a sophisticated understanding of the concepts and competencies relevant to the expected learning.

Traditional

Students accumulate **points** tied to **events**

e.g., “Quiz 2.3”

Standards-Based

Students demonstrate **evidence** in relation to **learning standards**

e.g., “use ratios and rates to make comparisons between quantities”

Name	Learning Outcome									
	1	2	3	4	5	6	7	8	9	10
Aaron	Ex	P	Ex	P	P	P	P	Ex	P	P
Blake	D	Em	Ex	P	P	Em	D	Ex	P	D
Denise	D	Em	P	D	P	D	Em	D	D	Em
…										

E D P P → P


Conversations
EVIDENCE OF STUDENT LEARNING
Observations
Products

BCAMT

British Columbia Association
of Mathematics Teachers