

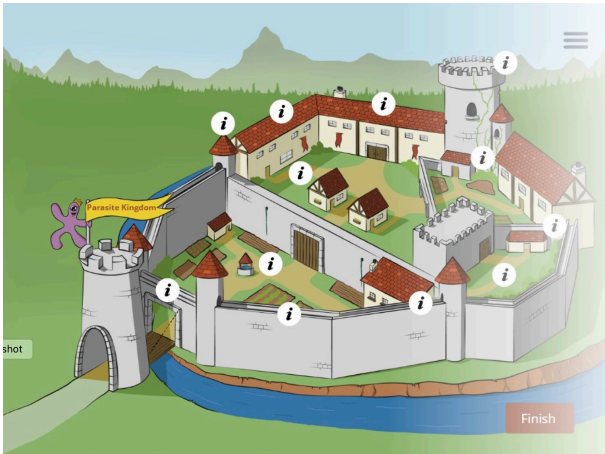
Welcome to SLU!

Sample class
Prof. Bryan Clair



SAINT LOUIS
UNIVERSITY™

— EST. 1818 —



MLS 4541 Medical Parasitology: Welcome to Parasite Kingdom!

Instructor:

Dr. Elizabeth Blessing
Associate Professor, Medical
Laboratory Science





Representing Reality



Filming and producing **non-fiction content** for **social media**, **reality tv**, and **documentary**

Prof. Alex H. Rafi, MFA
Assistant Professor/Film & Media Studies Coordinator
Department of Communication



The Finger of God

The House of Farnese and the Jesuits

Fr. Sam Zeno Conedera, SJ





Using Image Recognition to Combat Human Trafficking



Dr. Abby Stylianou
Assistant Professor, Department of Computer Science
Fellow of the Taylor Geospatial Institute
Saint Louis University

TraffickCam

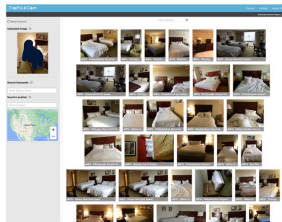
Hotels, Trafficking and Images

Human traffickers operate out of hotels

Traffickers advertise online with images taken inside hotel rooms

Identifying the specific hotels used can help:

- Find victims
- Document crime locations
- Understand criminal networks



My research:

- How to make this search better
- How to incorporate investigator feedback into the search and underlying models
- How to support natural language queries
- And lots of other vision/ML problem domains too
 - Agriculture, medical imaging...

Numbers in Clay

MATH 4050

History of Mathematics

Spring 2024

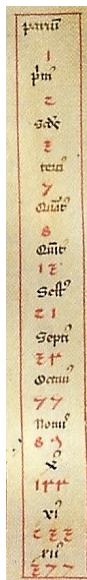
Prof. Bryan Clair

bryan@slu.edu



Arabic Numbers

- 1 2 3 4 5 6 7 8 9 0
- 63103
- Developed over centuries in India.
- Spread to Arabic world by 8th century CE.
- Popularized in Europe, 1202 by Fibonacci, *Liber Abacci*



Roman Numerals

- I V X L C D M
- MDCCCXVIII
- Roman, 800 BC.



Babylonian Numerals

- 3000BC - 500BC.
- Modern day Iraq.



Babylon

“Plimpton 322”, 1800BC



School in Babylon

Tablet HS217a, 1400-1100BC.



School in Babylon

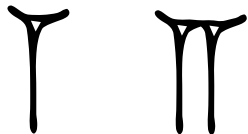
Tablet HS217a, 1400-1100BC.



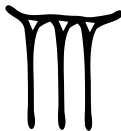
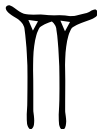
Babylonian Numerals



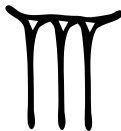
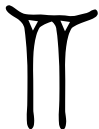
Babylonian Numerals



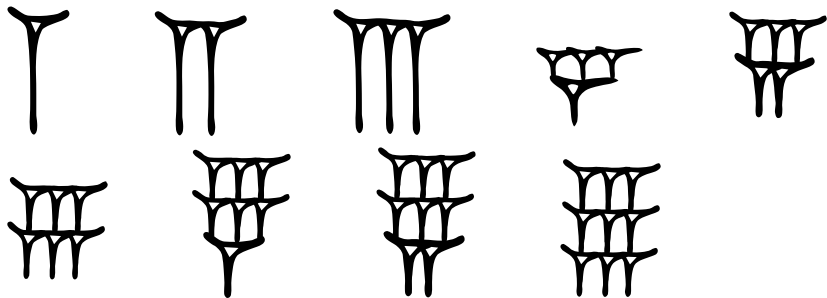
Babylonian Numerals



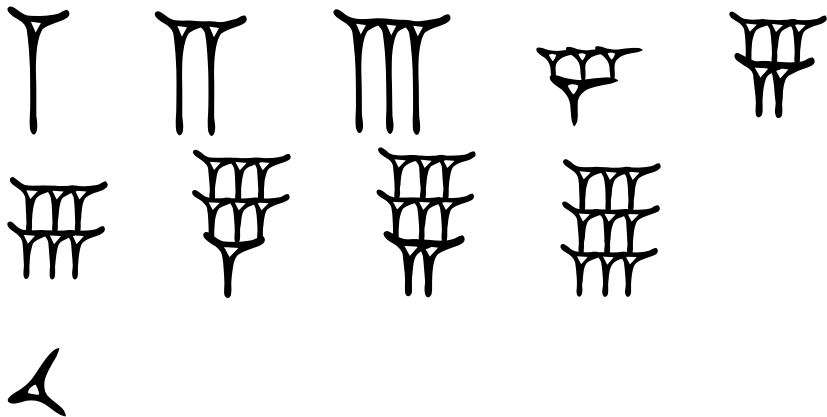
Babylonian Numerals



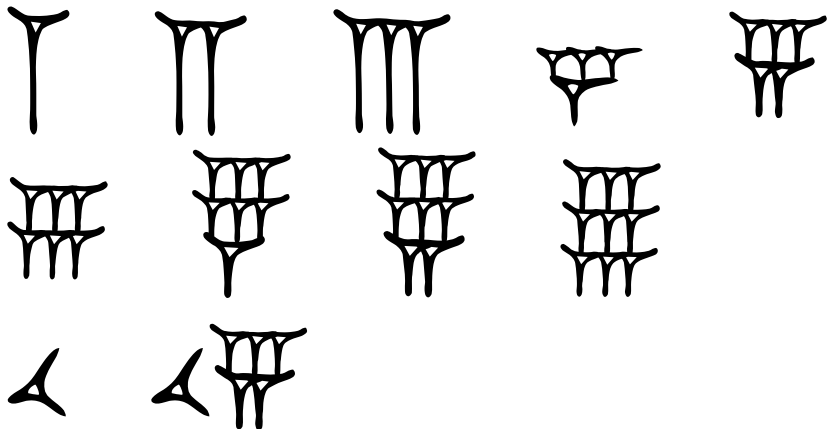
Babylonian Numerals



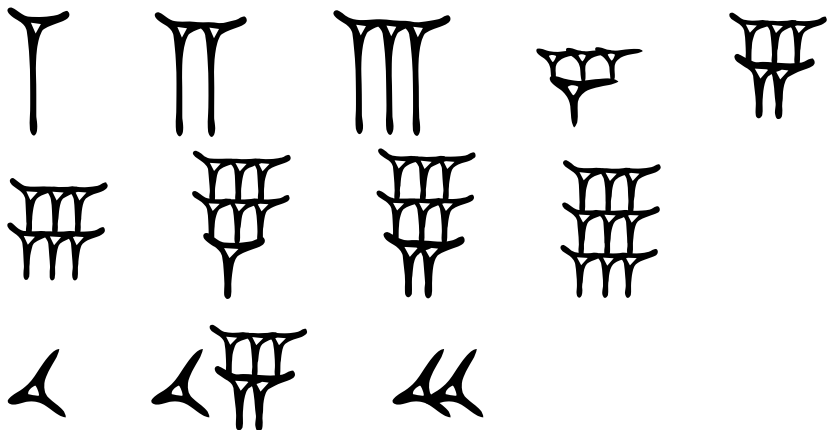
Babylonian Numerals



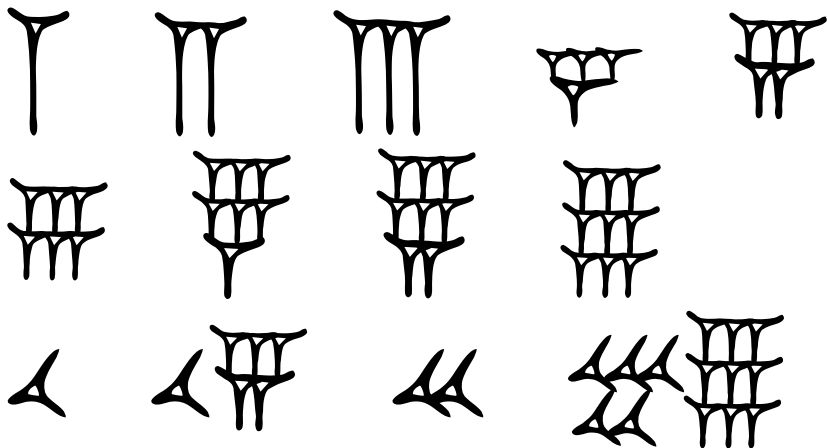
Babylonian Numerals



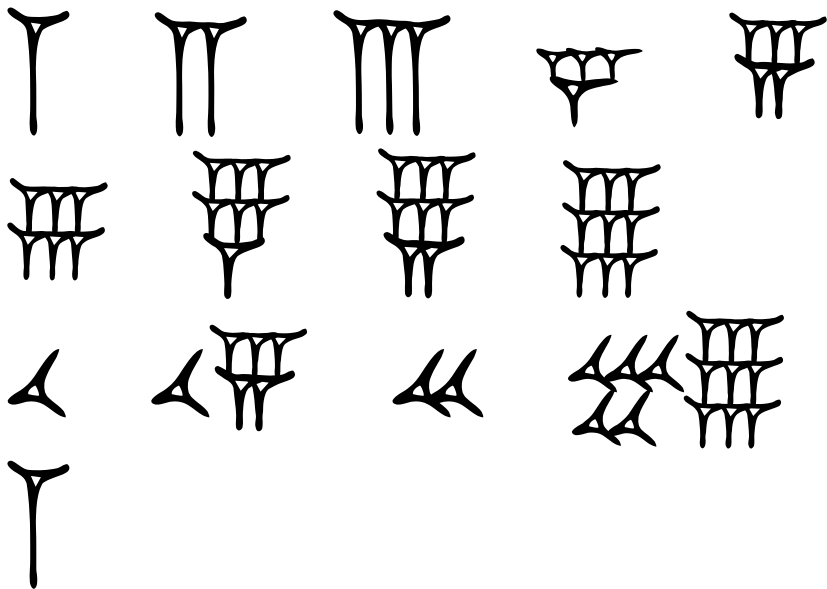
Babylonian Numerals



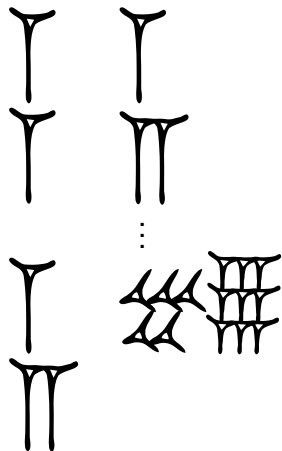
Babylonian Numerals



Babylonian Numerals



Babylonian Numerals



Babylonian Numerals

- Place system with digits 1-59, no zero.
- Base sixty: 1's place, 60's place, 3600's place, ...



11×3600



$+ 34 \times 60$



$+ 30 = 41670$

Babylonian Numerals

- Place system with digits 1-59, no zero.
- Base sixty: 1's place, 60's place, 3600's place, ...



11×3600

+



34×60

+



30

$= 41670$

Where do we use base 60?

School in Babylon

Tablet HS217a, 1400-1100BC. Front and back.



School in Babylon

Tablet HS217a, 1400-1100BC.



School in Babylon

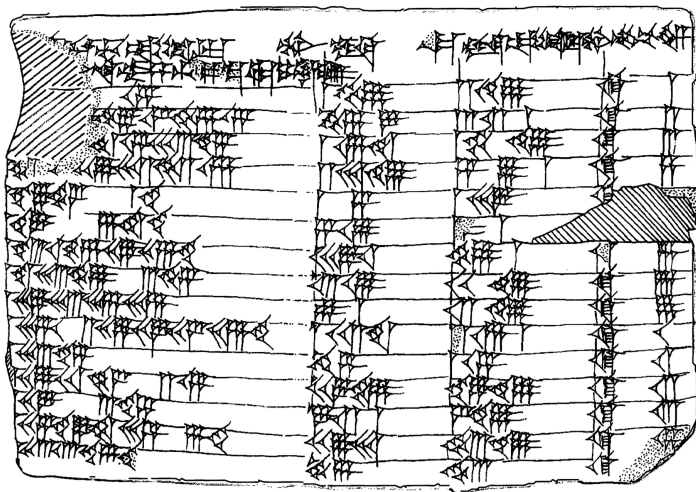
Tablet HS217a, 1400-1100BC.



1	9
2	18
3	27
4	36
5	45
6	54
7	1:3 = 63
8	1:12 = 72
9	1:21 = 81
10	1:30 = 90
11	1:39 = 99
12	1:48 = 108
13	1:57 = 117
14	2:6 = 126

Plimpton 322

1800BC. Try rows 1, 5, 9, 11.



Plimpton 322

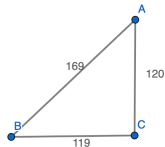
- Row 1: $169^2 - 119^2 = 14400$

Plimpton 322

- Row 1: $169^2 - 119^2 = 14400 = 120^2$

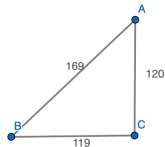
Plimpton 322

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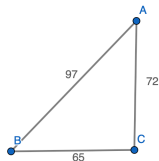


Plimpton 322

- Row 1: $169^2 - 119^2 = 14400 = 120^2$

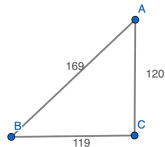


- Row 5: $97^2 - 65^2 = 5184 = 72^2$



Plimpton 322

- Row 1: $169^2 - 119^2 = 14400 = 120^2$



- Row 5: $97^2 - 65^2 = 5184 = 72^2$
- Row 9: $769^2 - 481^2 = 360000 = 600^2$
- Row 11: $75^2 - 45^2 = 3600 = 60^2$

