Math 123-01
Fall 2025
Dr. Lily Yen

Assignment 2

Show all your work

Name: _____
Number: _____
Signature: _____
Score: ___/10

Problem 1: Write 9265 as a Kaktovik numeral.

$9265 = 1 \times 8000 + 3 \times 400 + 3 \times 20 + 5 = 1 \times 20^3 + 3 \times 20^2 + 3 \times 20 + 5 =$

Score: /2

Problem 2: Express the Hindu-Arabic numeral 1579 in Mayan numeral.

$1579 = 4 \times (18 * 20) + 6 \times 20 + 19 =$

Score: /2

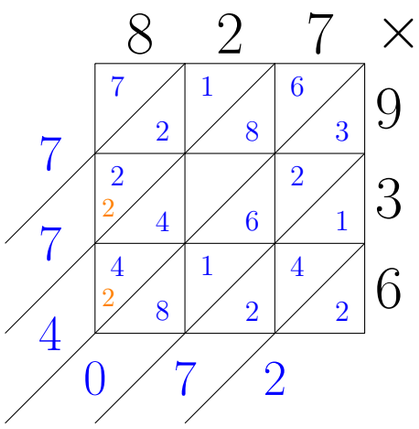
Problem 3: Translate the following Babylonian numeral to Hindu-Arabic numeral.

$47 \times 60^2 + 22 \times 60 + 39 = 170\,559$

Score: /2

Problem 4: Multiply 827×936 using the galley method.

774 072



Score: /2

Problem 5: Fire Horse likes to play with her model dragons. When she lines them up 5 in a row, she has 4 left over. When she lines them up 7 in a row, she finds her last row short of 2 dragons to complete a row. Suppose her collection of dragons contains at least 30, find the smallest possible number of dragons in her collection.

Say she has n rows of five. Then the total number of dragons is $5n + 4$. Similarly, if she has m rows of seven, the total is $7m - 2$. Therefore $5n + 4 = 7m - 2$, so $5n + 6 = 7m$. We find also the least common multiple of 5 and 7 is 35. We will list both modular classes until the first match.

$5n + 4$	4	9	14	19	...
$7m - 2$	5	12	19	26	...
Matching	19	**54**	89	124	...

Score: /2