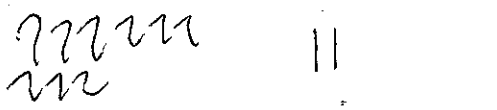
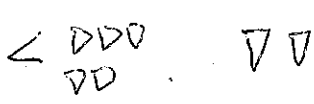
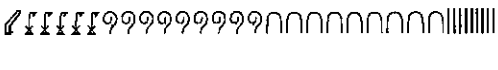
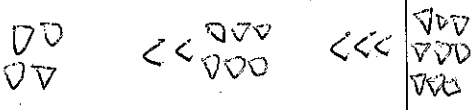
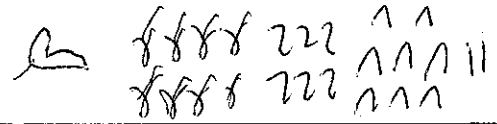
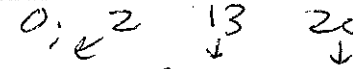
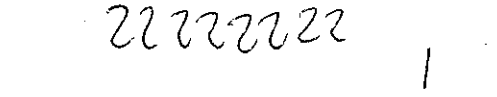
University of Bahrain
Bahrain Teachers College
TC2MA324: History of Mathematics
Dr. Abdulla Eid
Spring 2015

Quiz 1

Name: Solution

5

1. Fill the missing in the following table (no justification is necessary).

Decimal	Egyptian	Babylonian
902		
15999		
108,682		
$\frac{1}{27}$		
801		

1

2. (a) Write 61 in the binary system.

$\frac{1}{32}$ $\frac{1}{16}$ $\frac{1}{8}$ $\frac{1}{4}$ $\frac{1}{2}$ $\frac{1}{1}$

$q_{32} = \left\lfloor \frac{61}{32} \right\rfloor = 1 \rightsquigarrow r_{32} = 61 - 32 = 29$

$q_{16} = \left\lfloor \frac{30}{16} \right\rfloor = 1 \rightsquigarrow r_{16} = 30 - 16 = 13$

$q_8 = \left\lfloor \frac{13}{8} \right\rfloor = 1 \rightsquigarrow r_8 = 13 - 8 = 5$

$q_4 = \left\lfloor \frac{5}{4} \right\rfloor = 1 \rightsquigarrow r_4 = 5 - 4 = 1$

$q_2 = \left\lfloor \frac{1}{2} \right\rfloor = 0 \rightsquigarrow r_2 = 1 - 2 = 1$

7.5

(b) Multiply 61 by 9 the same way as the Egyptian did.

1	9 ✓
2	18
4	36 ✓
8	72 ✓
16	144 ✓
32	288 ✓

$61 * 9 = 9 + 36 + 72 + 144 + 288$

$= 549$

=

(c) Divide 61 by 9 the same way as the Babylonian did.

3

$61 \times \frac{1}{9} = 61 \times 0;6 \times 60$

$= 61 \times 400$

$= 24,400 = 6\ 46\ 40$

0;6 40

9 | 1 x 60

6 x 60

0

2.5

3. Write whether the following statements are true in the Egptian civilization or the Babylonian civilization.
   1. B They knew how to approximate π.
   2. B Existed in the Mesopotamia region.
   3. E Rhind Mathematical Papyrus is one of the few tablet that show their mathematical contribution.
   4. E They knew how to write the natural numbers in base 2.
   5. B They don't have a zero symbol, nevertheless they had a sense of "nothingness".

Ancient Egyptian Symbols and their Hindu-Arabic values:

1,000,000	100,000	10,000	1,000	100	10	1

Ancient Babylonian Symbols and their Hindu-Arabic values:

10	1