

**Worksheet: Math of the Egyptians**  
**Mr. Chvatal**

**Name:** \_\_\_\_\_

1. Recall that the Egyptians worked with fractions of the “ $n$ th part,” such as “the third” for  $\frac{1}{3}$ . For fractions that we would express with a numerator greater than one, such as  $\frac{3}{5}$ , the Egyptians would express as “the half and the tenth,” since  $\frac{1}{2} + \frac{1}{10} = \frac{3}{5}$ .

How would the Egyptians write  $\frac{7}{12}$ ? What about  $\frac{3}{8}$ ? And  $\frac{7}{20}$ ?

2. The Egyptians were also able to solve simple linear equations, although they were written somewhat differently than we are used to. Try these, of which a, b and d are problems translated from the Rhind Papyrus (c. 1650 B.C.E):
- A quantity. Its half and third are added to it. It becomes 10.
  - A quantity added to its fourth becomes 15.

- c. A quantity. Its eighth, fourth and third are added to it. It becomes 82.
- d. As many times as eight must be multiplied to give 19, so many times must seven be multiplied to give the quantity.
3. Problem 79 from the Rhind Papyrus: Seven houses have seven cats; each cat eats seven mice; each mouse eats seven ears of spelt; each spelt produces seven hekat of grain. What is the quantity of all that is counted?