



## Problem of the Week Grade 9 and 10

### Formidable Fractions?

For positive integers  $a$  and  $c$ , 
$$\frac{\left(\frac{a}{c} + \frac{a}{2} + 1\right)}{\left(\frac{2}{a} + \frac{2}{c} + 1\right)} = 18.$$

Determine the number of ordered pairs  $(a, c)$  that satisfy  $a + 3c \leq 99$ .

