

Writing Stimulating Maths Problems

For GCSE Students

Starter problems

Problem 1

$$\frac{\blacksquare}{5} + \frac{\blacksquare}{\blacksquare} = \frac{7}{10}$$

How many ways can you find to make $\frac{7}{10}$ by replacing the $\blacksquare$'s with positive whole numbers from 1 to 10 (you can use numbers more than once if you wish).

Problem 2

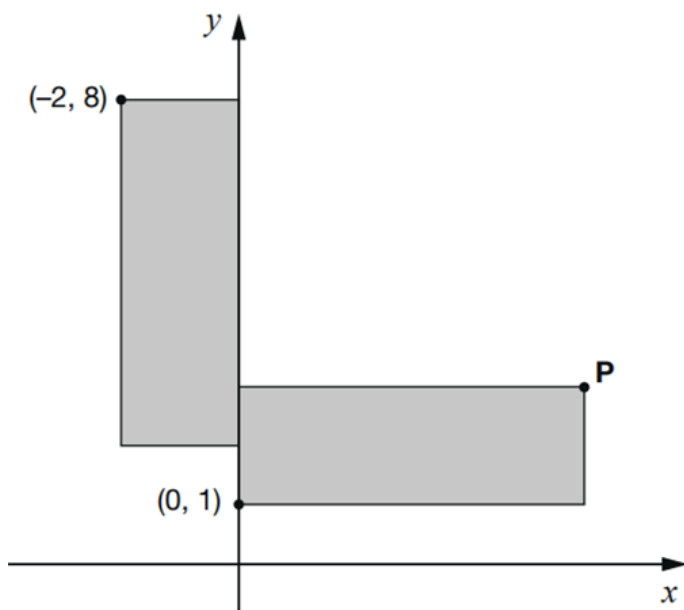
How many ways can you make exactly 4.8×10^6 by multiplying two positive numbers together?

Problem 3

The first term of a *linear* sequence is 5. The sequence also includes the term 25 somewhere in it.

The n^{th} term of the sequence is given by $an + b$ where a and b are whole numbers. How many possible values of a and b can you find?

Problem 4



Not drawn to scale

These two rectangles are *congruent*.

The length of each rectangle is **three times** its width.

What are the coordinates of the point P ?