

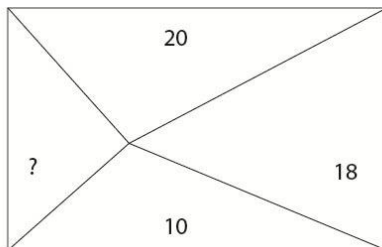
Maths Challenge - Week 300 – Problems (6 years of puzzling)

Welcome to week 300 of our weekly maths challenge, with problems and puzzles posed by David Browning, Rod Marshall, Ian Stewart, Annie Stothers and the [u3a Maths and Stats Subject Adviser](#) - David Martin. If you would like to share your ideas on how to solve these puzzles please join our [learning forum](#) or discuss within your u3a and interest group. Check back each week for the solutions and let us know how you get on by contacting the [u3a office](#). New maths puzzles will go up onto the website every Thursday.

Question 1.

Brenda thought of a number, doubled it, subtracted forty, divided by seven and added twenty resulting in a third of the number. What number did Brenda think of?

Question 2.



This rectangle has been divided into four triangular areas. The area of three of these is shown in the diagram; what is the area of the fourth?

Question 3.

Including 1 and the number itself, how many numbers smaller than 300 have exactly six factors?

Question 4.

If each letter of the alphabet is converted into a number by first multiplying the letter's position in the alphabet by an integer, A, and then adding integer B, the sum of the numbers for the letters in LEARN is 1135 and in LAUGH is 1111. What is the sum of the numbers for the letters in LIVE?