



AUSTRALIAN MATHS TRUST

Be a problem solver

Join the Computational and Algorithmic Thinking competition

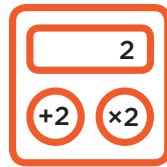
2 April 2019

Take the Twos challenge

Alex's favourite number is two. He plays a number game on his special *Twos* calculator. The calculator has only two operation buttons:

+2 which adds 2 to the number shown

×2 which doubles the number shown



He can press the buttons as many times as he likes, making the answer bigger each time. He always tries to press as few buttons as possible to get to his preferred number. Starting at 2, he could get to 8 by pressing $\times 2 + 2 + 2$, but this would take more button presses than $\times 2 \times 2$.

If the calculator starts at 2, find the fewest number of button presses to get to

- a) 10 b) 100 c) 1000

Check your answers at amt.edu.au

