## Different Products

Cut out the statements and put them in order, to prove that when you have $n$ consecutive numbers, the difference between the product of the first and last numbers, and the product of the second and penultimate numbers, will be $n-2$.

| The last number $\left(n^{\text {th }}\right)$ will be $a+n-1$ | A |
| :--- | :--- |
| $(a+1)(a+n-2)=a^{2}+a n-a+n-2$ | B |
| Therefore the difference between the product of the first and last <br> numbers, and the product of the second and penultimate numbers, <br> will be $n-2$ | C |
| Let the first number be $a$ | D |
| The product of the second and penultimate numbers will be <br> $(a+1)(a+n-2)$ | E |
| The second number will be $a+1$ | F |
| The product of the first and last numbers will be $a(a+n-1)$ | G |
| Start by taking a set of $n$ consecutive numbers | H |
| $a(a+n-1)=a^{2}+a n-a$ | J |
| The penultimate number will be $a+n-2$ |  |

