

Set 4 - Relay Problems 'B'

1. The sum of the coefficients of

$$(x - 5)^2 = x^2 - 10x + 25$$

is $(1-10+25) = 16$. Let A be the sum of the coefficients of $(2x - 1)^3$.

Pass on A .

2. You will receive A .

Three more than twice the sum of A and B is equal to one less than three times their product.

Pass on B .

3. You will receive B .

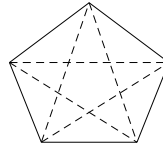
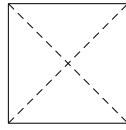
In the following diagram, when an integer is placed in each of the blank spaces, the product along every row, column and diagonal is the same.

12	2		C
3	3	12	
B		3	
	18		2

Pass on C .

4. You will receive C .

In the following diagram we see that there are 2 diagonals in a square, and 5 diagonals in a pentagon. Let D be the number of diagonals in a regular C -sided polygon.



Write down D .