ALTOGETHER EIGHT

One player aims to make an algebraic expression in as many ways as they can from the terms in the box. They may use any operation (x, ÷, +, -) between the terms shown and terms may be included in brackets. Each valid expression is worth one point. If all eight terms are used, that is worth five points.

For example :

Make 7k + 9

4k	3	2	2k
5	3k	5k	3

Note : terms may only be used once.

4k + 3k + 5 + 4k ÷ 2k + 2 is a satisfactory answer and scores one point.

4k + 3k + 5 + 2 + 2 is not allowed as the 2 cannot be used more than once.

4k + 3k + 3 x 3 is allowed as there are two 3s provided. This scores one point.

(4k + 3k + 3 x 3) x (5k x 2) ÷ (2k x 5) uses all 8 terms and scores five points.

PROBLEM ONE

9g + 1

4g 3	3g 6	2g 4	8g 1

PROBLEM TWO

3x + 3y

x y	2x 2y	6x 6y	9x 6y

PROBLEM THREE

8m - 6

4m 1	7m 2	2m 3	6m 9

PROBLEM FOUR

7h + 3g

h 2	g 12	5g 4	5h 3

PROBLEM FIVE

6p + 10q

3p 3	3q 2	2p q	6p 3