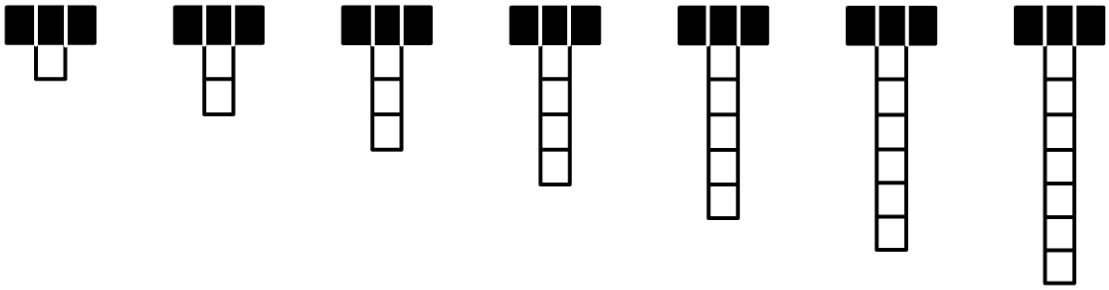
Maths-Whizz Teachers' Resource

Name: . . . . . Class: . . . . . .

Sequences, Functions and Graphs

Complete this table.

Q1



Shape Number	1	2	3	4	5	6	7
Number of black cubes	3	3	3	3	3	3	3
Number of white cubes	1	2	3	4	5	6	7
Total number of cubes	4	5	6	7	8	9	10

Complete the statement for the shape n.

Q2 Shape 1 has 1 black cube. It has 1 white cube in each of the 2 arms.
Shape 2 has 1 black cube. It has 2 white cubes in each of the 2 arms.
Shape 3 has 1 black cube. It has 3 white cubes in each of the 2 arms.
Shape 4 has 1 black cube. It has 4 white cubes in each of the 2 arms.

Shape n has [1] black cubes. It has [n] white cubes in each of the 2 arms.

Answer this question.

Q3 Shape n has 3 black cubes and it has n white cubes in each of the 4 arms.
Click the box that shows the total number of cubes in shape n.

4n + 2	**3 + 4n**	4n	2 + 3n

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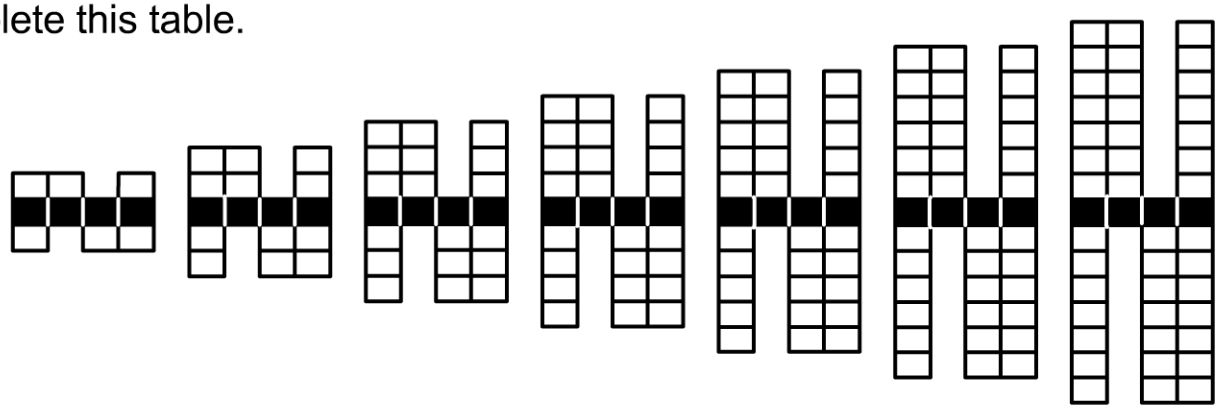
Sequences, Functions and Graphs

Complete this table.

Q4



Shape Number	1	2	3	4	5	6	7
Number of black cubes	4	4	4	4	4	4	4
Number of white cubes	6	12	18	24	30	36	42
Total number of cubes	10	16	22	28	34	40	46

Complete the statement for the shape n.

Q5 Shape 1 has 3 black cubes. It has 1 white cube in each of the 3 arms.
Shape 2 has 3 black cubes. It has 2 white cubes in each of the 3 arms.
Shape 3 has 3 black cubes. It has 3 white cubes in each of the 3 arms.
Shape 4 has 3 black cubes. It has 4 white cubes in each of the 3 arms.

Shape n has [3] black cubes. It has [n] white cubes in each of the 2 arms.

Answer this question.

Q6 Shape n has 2 black cubes and it has n white cubes in its one arm.
Click the box that shows the total number of cubes in shape n.

[2n + 1] [2n + 2] [n + 5] [**n + 2**]