

**Q1-Q2 (Pattern) Day 101****Name:** \_\_\_\_\_

1. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **white tiles in total** are needed to make the **fourth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of black tiles in pattern 5** and the **total of white tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

2. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **white tiles in total** are needed to make the **fourth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of white tiles in pattern 4** and the **total of white tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

3. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **black tiles in total** are needed to make the **fifth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of white tiles in pattern 4** and the **total of white tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

4. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **white tiles in total** are needed to make the **fifth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of black tiles in pattern 5** and the **total of black tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

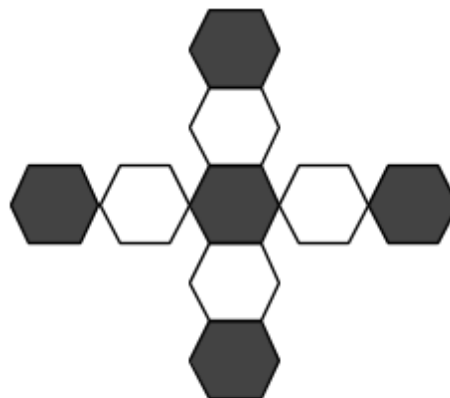
5. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **black tiles in total** are needed to make the **fifth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of white tiles in pattern 5** and the **total of white tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

6. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **white tiles in total** are needed to make the **fifth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of black tiles in pattern 5** and the **total of white tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

7. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 4 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3



Pattern 4

a) How many **black tiles in total** are needed to make the **fifth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of white tiles in pattern 5** and the **total of white tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

8. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **white tiles in total** are needed to make the **fifth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of black tiles in pattern 5** and the **total of white tiles in pattern 2**? Write your answer in the space below.

\_\_\_\_\_ tiles

---



9. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **black tiles in total** are needed to make the **sixth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of white tiles in pattern 6** and the **total of white tiles in pattern 2**? Write your answer in the space below.

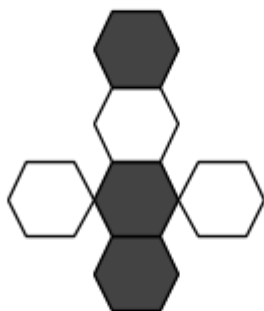
\_\_\_\_\_ tiles

---

10. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **black tiles in total** are needed to make the **sixth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of white tiles in pattern 6** and the **total of white tiles in pattern 1**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

11. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 5 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3



Pattern 4



Pattern 5

a) How many **white tiles in total** are needed to make the **sixth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of black tiles in pattern 6** and the **total of white tiles in pattern 6**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

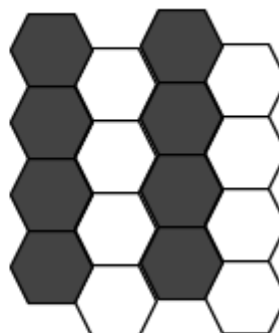
12. Look at the patterns below. They are made up of **hexagonal (6 sided) black and white** tiles. All the tiles are the same size. The first 3 patterns of the sequence are shown below.



Pattern 1



Pattern 2



Pattern 3

a) How many **white tiles in total** are needed to make the **fifth pattern**? Write your answer in the space below.

\_\_\_\_\_ tiles

b) What is the **difference** between the **total of black tiles in pattern 5** and the **total of white tiles in pattern 5**? Write your answer in the space below.

\_\_\_\_\_ tiles

---

**Answers**

- |          |      |
|----------|------|
| 1. a) 6  | b) 7 |
| 2. a) 8  | b) 6 |
| 3. a) 15 | b) 7 |
| 4. a) 4  | b) 4 |
| 5. a) 9  | b) 4 |
| 6. a) 4  | b) 3 |
| 7. a) 7  | b) 5 |
| 8. a) 6  | b) 2 |
| 9. a) 7  | b) 6 |
| 10.a) 5  | b) 2 |
| 11.a) 5  | b) 2 |
| 12.a) 18 | b) 0 |