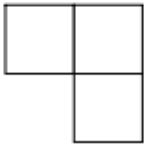


Assignment: T4-61 Into to Sequences

1. Here is a pattern of squares

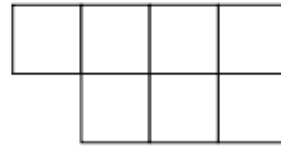
Pattern 1



Pattern 2



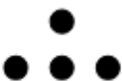
Pattern 3



- a) Draw pattern 4
- b) How many squares will there be in pattern number 13?
- c) Which pattern has 27 squares?

2. Here is a pattern of dots

Pattern 1



Pattern 2



Pattern 3



- a) Draw pattern 4
- b) How many dots will there be in pattern 15?
- c) Jack says there are 70 dots in pattern 20. Is he right? You must explain your answer.

3. Here is a made from bricks

Pattern 1



Pattern 2



Pattern 3



- a) Draw pattern 4
- b) How many bricks will there be in pattern number 8?
- c) Which pattern will have 49 bricks?
- d) How many bricks will there be in pattern n?

4. Here is a made from white and grey tiles.

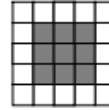
Pattern 1



Pattern 2



Pattern 3



- Draw pattern 4
- How many white tiles will there be in pattern number 10?
- How many grey tiles will there be in pattern 8?
- Miles has 49 grey tiles and 32 white tiles. Which pattern can he make?
- Emma has 90 grey tiles and 42 white tiles. She says she can make pattern number 10. She is incorrect, explain why.
- How many more grey and white tiles will Emma need to make pattern number 10.

Find the next three terms in the given sequence.

5. $-10, 0, 10, 20, \dots$

6. $-31, 169, 369, 569, \dots$

7. $16, 36, 56, 76, \dots$

8. $131, 252, 373, 494, 5115, \dots$

Find the next four numbers in the sequence and name the sequences (you may have to do a little research!)

9. $1, 1, 2, 3, 5, 8, \dots$

10. $1, 131, 13431, 1347431, \dots$