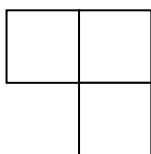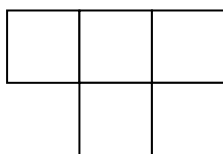# Sequences from patterns

1. Here is a pattern of squares
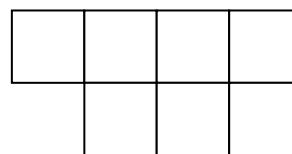
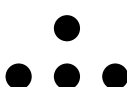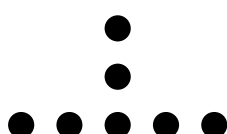Pattern 1   Pattern 2   Pattern 3

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
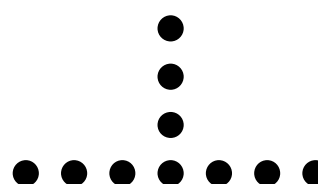
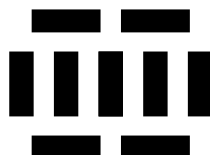Pattern 1   Pattern 2   Pattern 3

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.
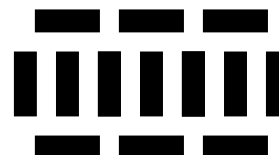
3. Here is a made from bricks

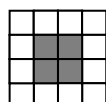Pattern 1   Pattern 2   Pattern 3

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.
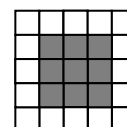
Pattern 1   Pattern 2   Pattern 3

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