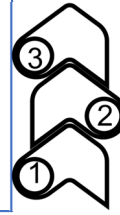


**Q2.**

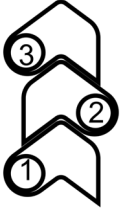
5 female giraffes have a mean weight of  $x$  kg.  
7 male giraffes have a mean weight of  $y$  kg.

Write down an expression, in terms of  $x$  and  $y$ ,  
for the mean weight of all 12 giraffes.

**(Total for Question is 2 marks)**

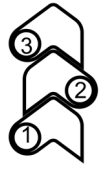
01 02 **Q3. (d) Simplify  $(9x^8y^3)^{\frac{1}{2}}$** 

(2)

**Q7.**

Make  $t$  the subject of the formula

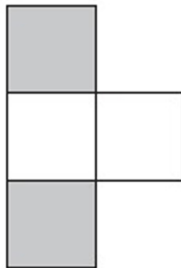
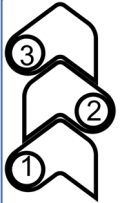
$$p = \frac{3 - 2t}{4 + t}$$



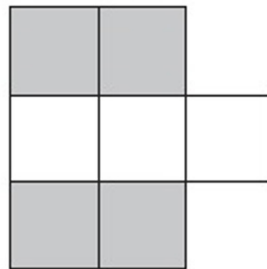
**(Total for Question is 4 marks)**

03 04 05 06 **Q10.**

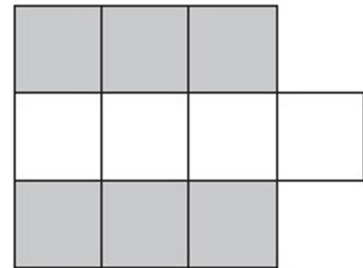
Here are some patterns made from white centimetre squares and grey centimetre squares.



Pattern 1



Pattern 2



Pattern 3

A Pattern has 20 grey squares.

(a) Work out how many white squares there are in this Pattern.

..... (2)

(b) Find an expression, in terms of  $n$ , for the total number of centimetre squares in Pattern  $n$ .

..... (2)

**(Total for Question is 4 marks)**

07 08 09 10 11 12 13 14 15 **Q12.**

Here are the first five terms of an arithmetic sequence.

2    6    10    14    18

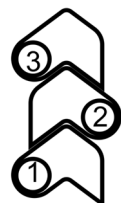
(a) Write down an expression, in terms of  $n$ , for the  $n$ th term of this sequence.

..... (2)

(b) Is 86 a term in the sequence?

You must give a reason for your answer. (1)

**(Total for question = 3 marks)**

16 17 18 19 Mixed

**Q13.**

Here are the first six terms of a Fibonacci sequence.

1      1      2      3      5      8

The rule to continue a Fibonacci sequence is,

the next term in the sequence is the sum of the two previous terms.

(a) Find the 9th term of this sequence.

..... (1)

The first three terms of a different Fibonacci sequence are

$a$        $b$        $a + b$

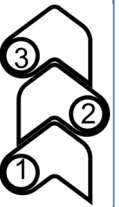
(b) Show that the 6th term of this sequence is  $3a + 5b$  (2)

Given that the 3rd term is 7 and the 6th term is 29,

(c) find the value of  $a$  and the value of  $b$ .

..... (3)

**(Total for question = 6 marks)**



Edexcel GCSE 2019 Nov 2H Q6 / 2F Q26

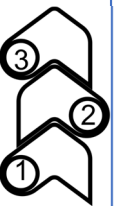


(Total for Question 6 is 3 marks)

The  $n$ th term of a sequence is  $2n^2 - 1$

The  $n$ th term of a different sequence is  $40 - n^2$

Show that there is only one number that is in both of these sequences.



Edexcel GCSE 2017 Jun 2H Q22

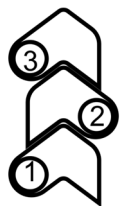


(Total for Question 22 is 3 marks)

Here are the first five terms of a sequence.

4      11      22      37      56

Find an expression, in terms of  $n$ , for the  $n$ th term of this sequence.



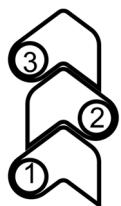
$$2n^2 + n + 1$$

Edexcel GCSE 2020 Nov 1H Q17



(Total for Question 17 is 4 marks)

Make  $f$  the subject of the formula  $d = \frac{3(1 - f)}{f - 4}$



$$f = \frac{4d + 3}{d + 3}$$