



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Sequences · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Sequences

Total marks available: 80

Sequences

Q1

[2 marks]

The n th term of a sequence is $2n - 1$. Find the 9th term.

Q2

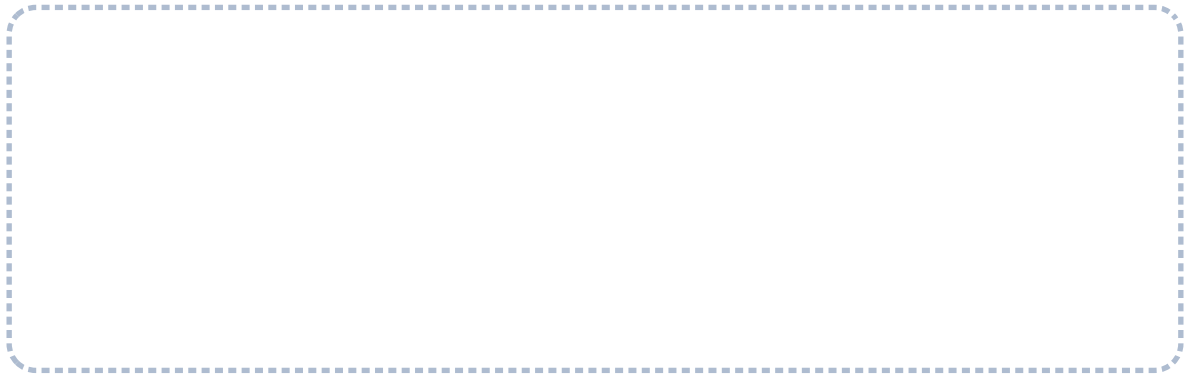
[2 marks]

The n th term of a sequence is $2n + 6$. Find the 17th term.

Q3

[2 marks]

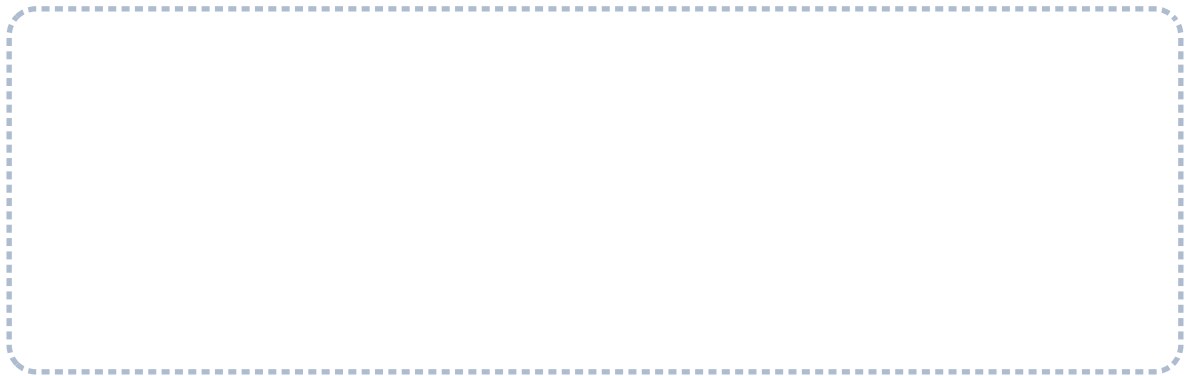
Here are the first four terms of a sequence: $-9, -10, -11, -12, \dots$ Find the next term.



Q4

[2 marks]

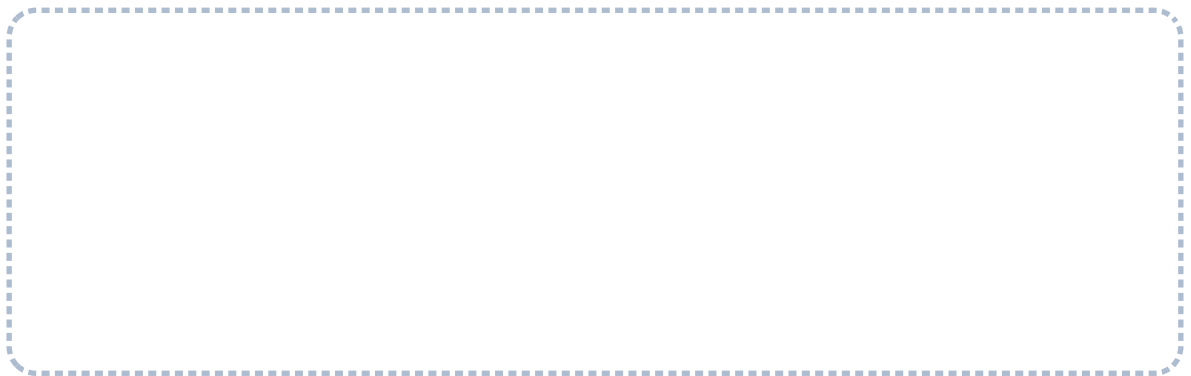
Here are the first four terms of a sequence: $-1, -9, -17, -25, \dots$ Find the next term.



Q5

[2 marks]

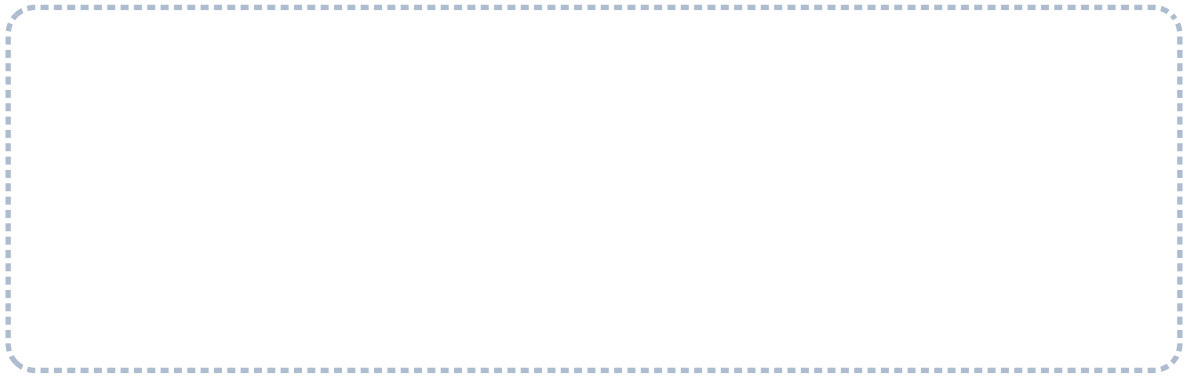
The n th term of a sequence is $6n + 11$. Find the 7th term.



Q6

[2 marks]

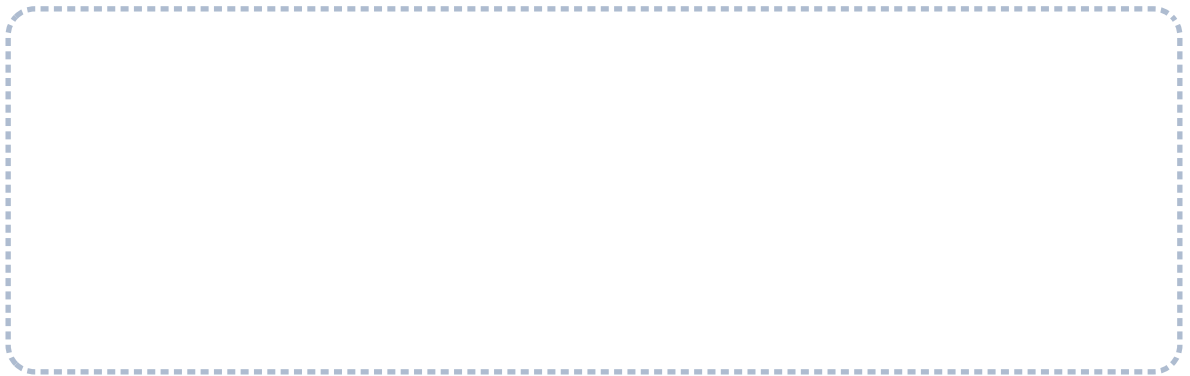
Here are the first four terms of a sequence: $-2, -4, -6, -8, \dots$ Find the next term.



Q7

[2 marks]

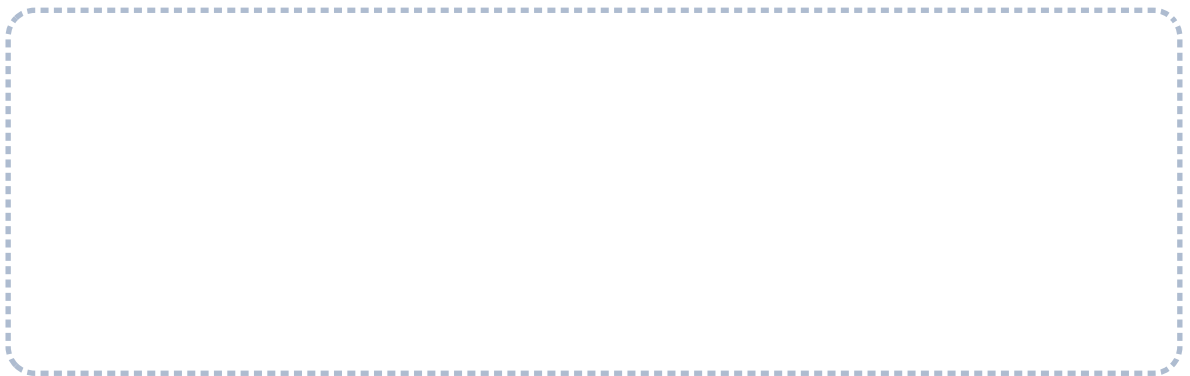
The n th term of a sequence is $6n + 15$. Find the 7th term.



Q8

[2 marks]

Here are the first four terms of a sequence: $8, 12, 16, 20, \dots$ Find the next term.



Q9

[2 marks]

The n th term of a sequence is $8n + 2$. Find the 10th term.

Q10

[2 marks]

The n th term of a sequence is $5n + 4$. Find the 13th term.

Q11

[3 marks]

The n th term of a sequence is $6n + 3$. Is 20 a term in this sequence? Give a reason.

Q12

[3 marks]

The n th term of a sequence is $7n + 6$. Is 105 a term in this sequence? Give a reason.

Q13

[3 marks]

The n th term of a sequence is $9n + 5$. Is 132 a term in this sequence? Give a reason.

Q14

[3 marks]

The n th term of a sequence is $9n + 7$. Is 123 a term in this sequence? Give a reason.

Q15

[3 marks]

The n th term of a sequence is $4n + 5$. Is 65 a term in this sequence? Give a reason.

Q16

[3 marks]

Find the n th term of the sequence 23, 32, 41, 50, ...

Q17

[3 marks]

Find the n th term of the sequence 9, 14, 19, 24, ...

Q18

[3 marks]

Find the n th term of the sequence $-7, -2, 3, 8, \dots$

Q19

[3 marks]

The n th term of a sequence is $2n - 10$. Is 19 a term in this sequence? Give a reason.

Q20

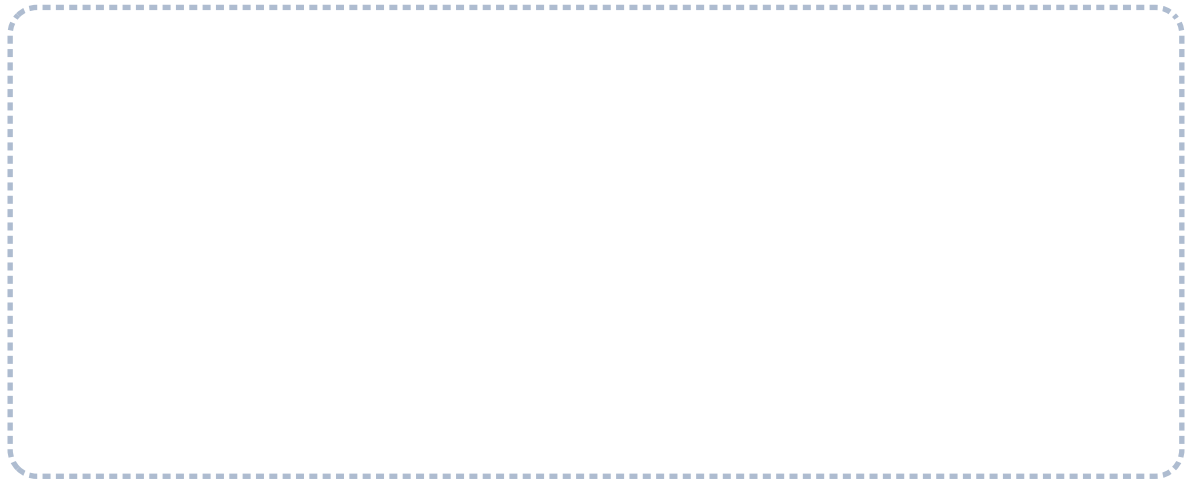
[3 marks]

Find the n th term of the sequence $-3, -1, 1, 3, \dots$

Q21

[4 marks]

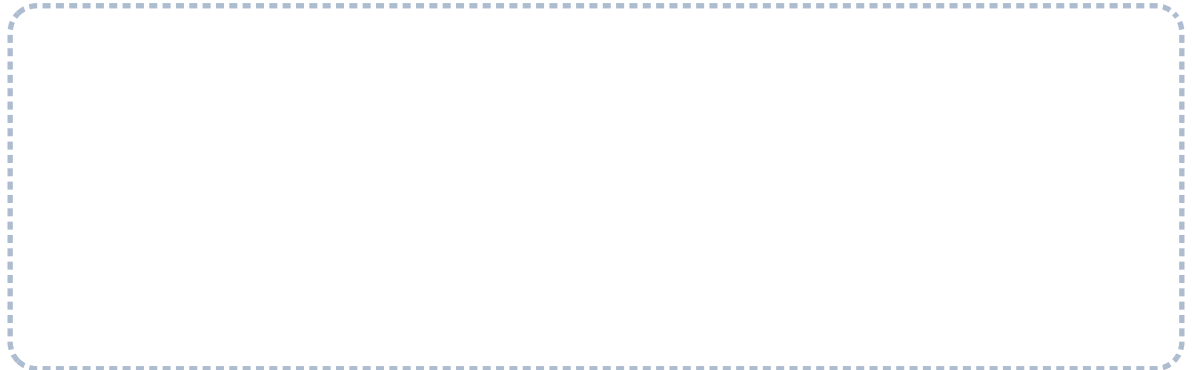
Pattern 1 of a sequence uses 7 matchsticks. Each new pattern uses 4 more matchsticks than the pattern before it. How many matchsticks are used in pattern 15?



Q22

[2 marks]

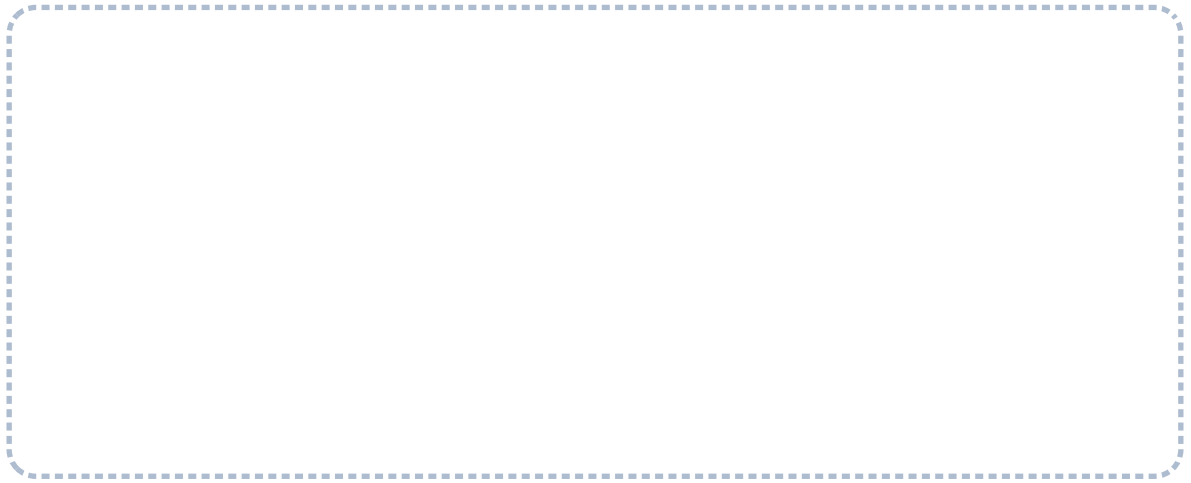
Here are the first four terms of a sequence: 3, 15, 75, 375, ... Each term is found by multiplying the previous term by the same number. Find the next term.



Q23

[4 marks]

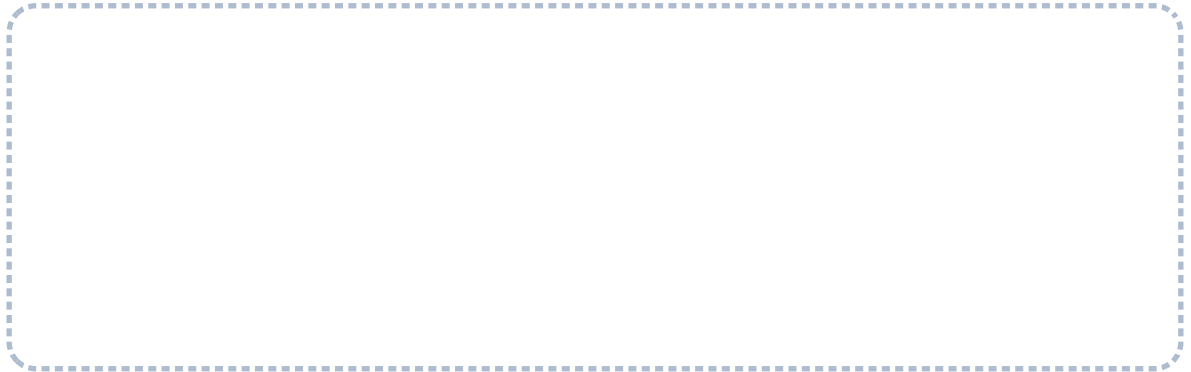
Pattern 1 of a sequence uses 8 tiles. Each new pattern uses 3 more tiles than the pattern before it. How many tiles are used in pattern 11?



Q24

[2 marks]

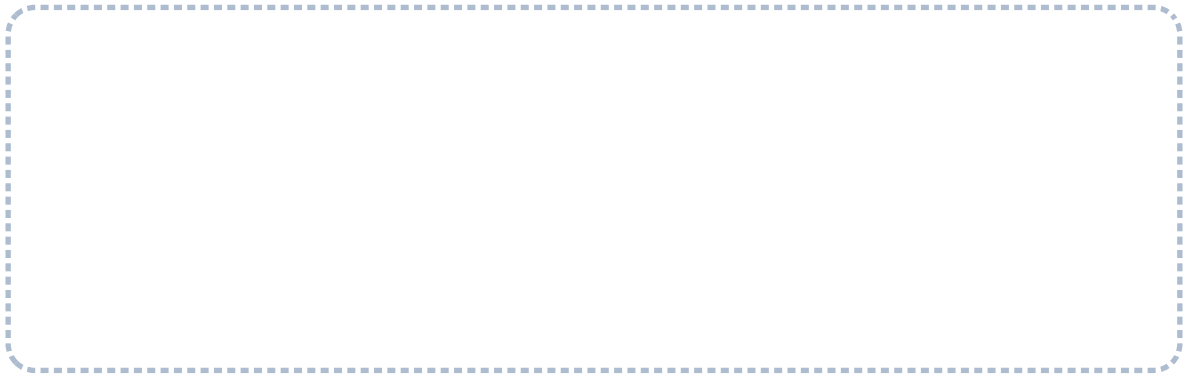
Here are the first four terms of a sequence: 5, 15, 45, 135, ... Each term is found by multiplying the previous term by the same number. Find the next term.



Q25

[2 marks]

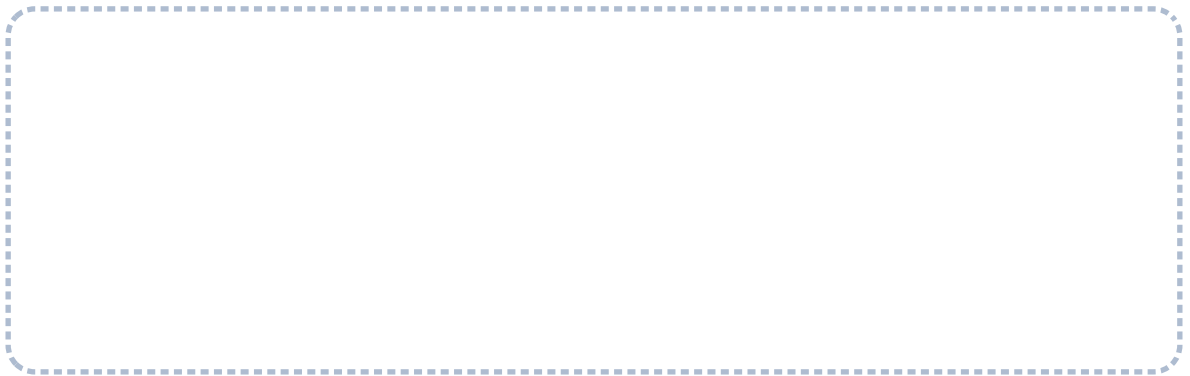
Here are the first four terms of a sequence: 32, 16, 8, 4, ... Each term is found by multiplying the previous term by the same number. Find the next term.



Q26

[2 marks]

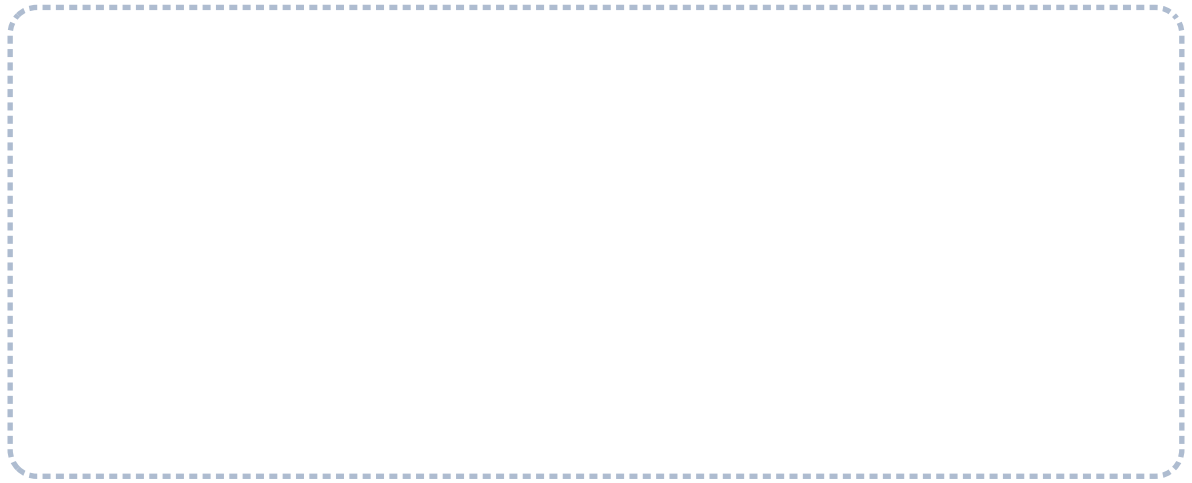
Here are the first four terms of a sequence: 2, 8, 32, 128, ... Each term is found by multiplying the previous term by the same number. Find the next term.



Q27

[4 marks]

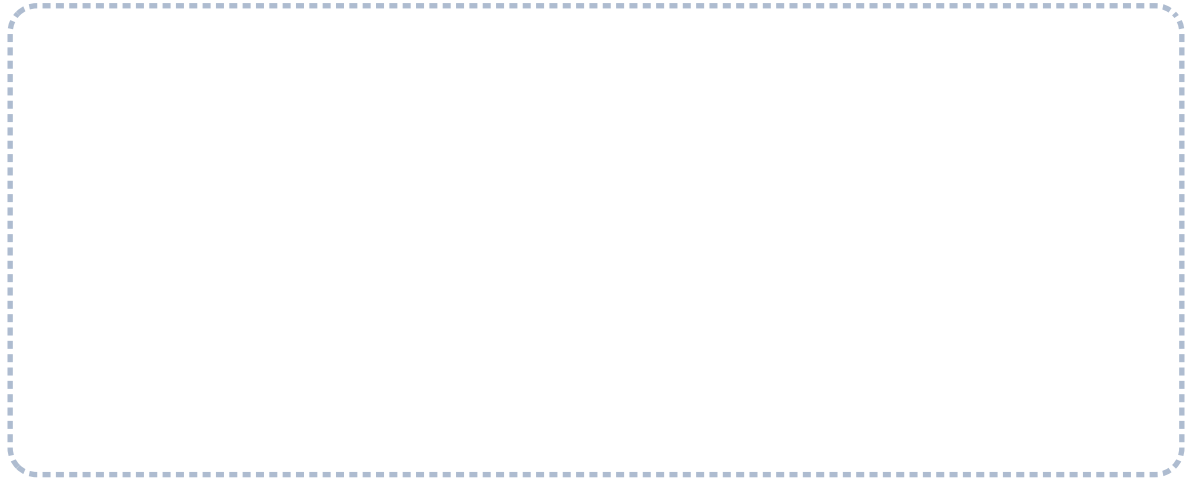
Pattern 1 of a sequence uses 3 matchsticks. Each new pattern uses 3 more matchsticks than the pattern before it. How many matchsticks are used in pattern 12?



Q28

[4 marks]

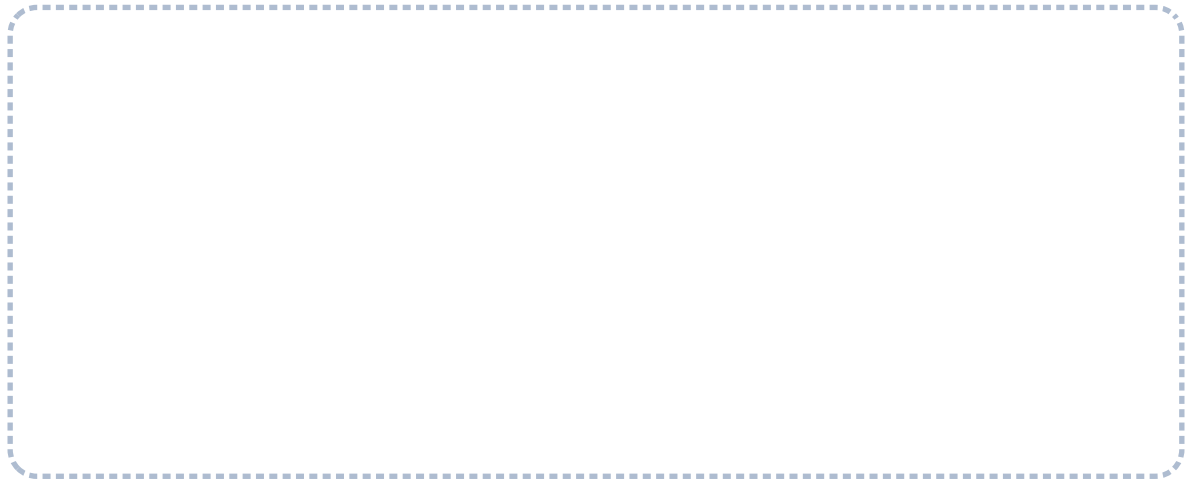
Pattern 1 of a sequence uses 6 dots. Each new pattern uses 2 more dots than the pattern before it. How many dots are used in pattern 6?



Q29

[4 marks]

Pattern 1 of a sequence uses 9 matchsticks. Each new pattern uses 6 more matchsticks than the pattern before it. How many matchsticks are used in pattern 13?



Q30

[2 marks]

Here are the first four terms of a sequence: 64, 32, 16, 8, ... Each term is found by multiplying the previous term by the same number. Find the next term.

