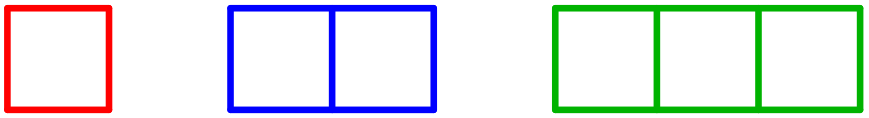
Sequences Starters

Starter 1

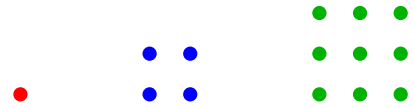
Matchsticks



?

1. Draw the next shape.
2. How many matchsticks in the 4th?

Dots



?

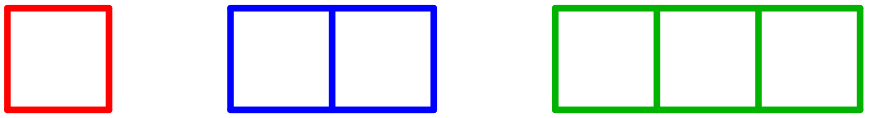
3. Draw the next pattern.
4. How many dots in the 4th?

5. Complete The Sequence

13, 23, 33, __, __, __

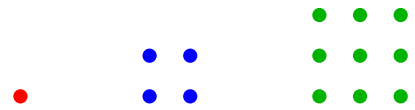
Starter 1

Matchsticks



1. Draw the next shape.
2. How many matchsticks in the 4th?

Dots

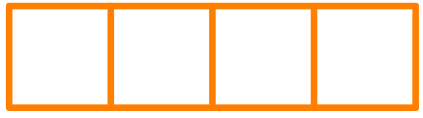


3. Draw the next pattern.
4. How many dots in the 4th?

5. Complete The Sequence

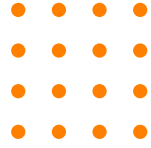
13, 23, 33, 43, 53, 63 (add 10)

Answers

1. 

2. 13 sticks

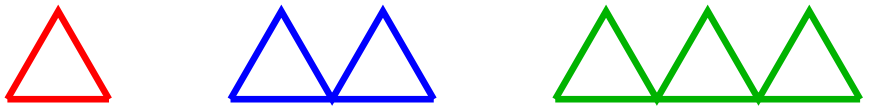
Answers

3. 

4. 16 dots

Starter 2

Matchsticks



1. Draw shape 4.
2. How many matchsticks in shape 4?

Dots

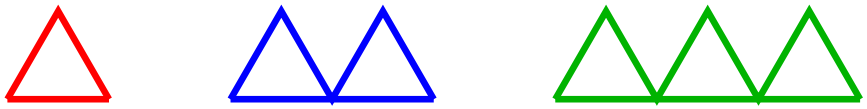
3. Draw pattern 4.
4. How many dots in pattern 4?

5. Complete The Sequence

1, 3, 5, 7, _, __, __

Starter 2

Matchsticks



1. Draw shape 4.
2. How many matchsticks in shape 4?

Dots

3. Draw pattern 4.
4. How many dots in pattern 4?

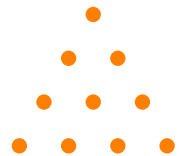
5. Complete The Sequence

1, 3, 5, 7, 9, 11, 13 (add 2)

Answers

1. 
2. 9 sticks

Answers

3. 
4. 10 dots

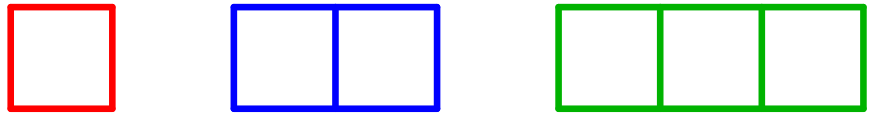
Starter 3

Dots

?

1. Draw pattern 4.
2. How many dots in pattern 4?

Matchsticks



?

3. How many sticks in the 10th shape?
4. Find a rule.

5. Complete The Sequence

3, 6, 9, 12, __, __, __

6. 20th term?

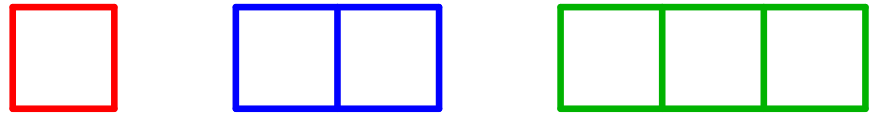
Starter 3

Dots

?

1. Draw pattern 4.
2. How many dots in pattern 4?

Matchsticks



?

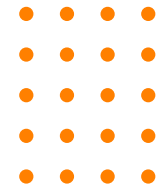
3. How many sticks in the 10th shape?
4. Find a rule.

5. Complete The Sequence

3, 6, 9, 12, 15, 18, 21 (add 3)

6. 20th term? 60

Answers

1. 

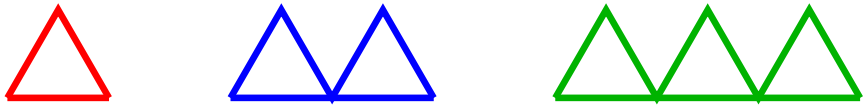
2. 20 dots (pattern is $n \times (n+1)$ dots)

Answers

3. 31
4. Rule: $3n+1$

Starter 4

Matchsticks



?

1. Find a rule for the number of matchsticks.
2. Use it to find the 20th term.

Dots

?

3. Find a rule for the number of dots.
4. Use it to find the 10th term.

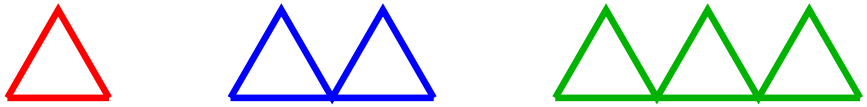
5. Complete The Sequence

5, 9, 13, 17, __, __, __

6. nth term rule? 100th term?

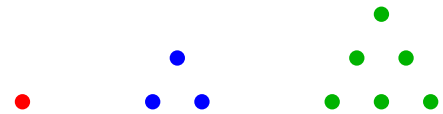
Starter 4

Matchsticks



1. Find a rule for the number of matchsticks.
2. Use it to find the 20th term.

Dots



3. Find a rule for the number of dots.
4. Use it to find the 10th term.

5. Complete The Sequence

5, 9, 13, 17, 21, 25, 29 (add 4)

6. nth term rule? 100th term?

$4n + 1$, 401

Answers

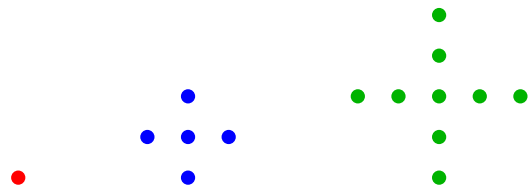
1. Rule: $2n + 1$
2. 20th term: 41

Answers

3. Rule: $\frac{n(n+1)}{2}$
4. 10th term: 55

Starter 5

Dots



?

1. Draw shape 4.
2. How many dots in shape 5?
3. Try to find a rule.

Special Sequence

1, 1, 2, 3, 5, 8, __, __, __

4. Next three terms?
5. What is the rule?

6. Complete The Sequence

1, 4, 9, 16, __, __, __

7. 20th term?

Starter 5

Dots

?

1. Draw shape 4.
2. How many dots in shape 5?
3. Try to find a rule.

Special Sequence

1, 1, 2, 3, 5, 8, 13, 21, 34

4. Next three terms?
5. What is the rule?

6. Complete The Sequence

1, 4, 9, 16, 25, 36, 49 (square numbers n^2)

7. 20th term? 400

Answers

1.

2. Shape 5 has 17 dots
3. Rule: $4n - 3$

Answers

4. 13, 21, 34
5. Fibonacci: add the two previous terms