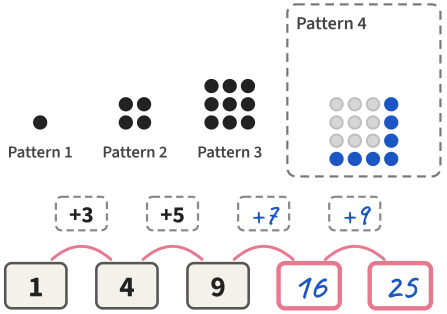
Square and triangular numbers

ANSWERS

1

These are the square numbers.
Draw pattern 4. Then find the next two square numbers.

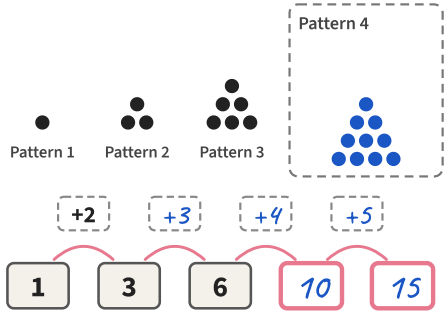


The jump grows by 2 each time.

Next two 16, 25

2

These are the triangular numbers.
Draw pattern 4. Then find the next two triangular numbers.

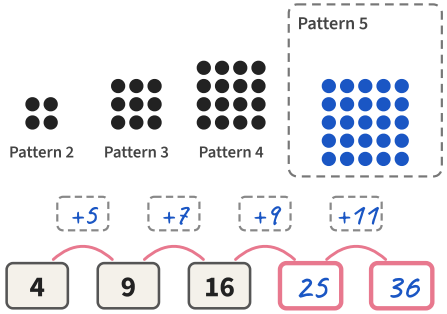


The jump grows by 1 each time.

Next two 10, 15

3

These are the square numbers.
Draw pattern 5. Then find the next two square numbers.

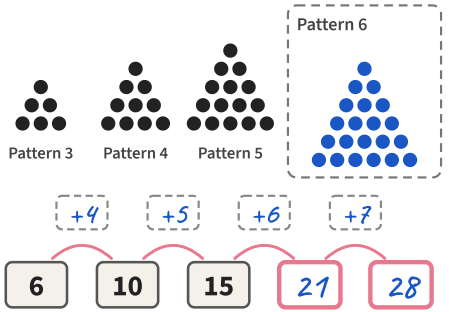


The jump grows by 2 each time.

Next two 25, 36

4

These are the triangular numbers.
Draw pattern 6. Then find the next two triangular numbers.



Next two 21, 28

5

Here are eight numbers.
3, 8, 10, 16, 21, 25, 30, 49
Write down the square numbers and the triangular numbers.

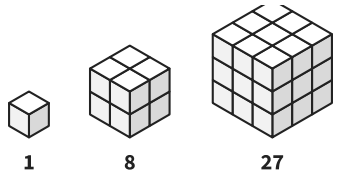
Square 16, 25, 49

Triangular 3, 10, 21

Neither 8, 30

6

These are the first three cube numbers.
Write down the next two cube numbers.



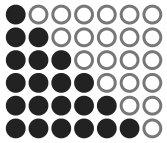
4 × 4 × 4 = 64

5 × 5 × 5 = 125

Next two 64, 125

7

Two copies of pattern 6 of the triangular numbers fit together to make this rectangle. How many dots are in pattern 6?



6 rows of 7: 6 × 7 = 42

half of 42 is 21

Answer 21 dots

8

Lily says the square numbers are
1, 4, 7, 10, 13, … because they go up by 3 each time. Explain what Lily has done wrong. Then write the first five square numbers.

the jumps are 3, 5, 7, 9: they grow by 2

7 is not a square number

Square numbers 1, 4, 9, 16, 25

Square and triangular numbers *further practice*

ANSWERS

9

Write down the 7th square number and the 7th triangular number.

7 × 7

1 + 2 + 3 + … + 7

7th square 49

7th triangular 28

10

Write down all the square numbers between 50 and 100.

49, 64, 81, 100

Answer 64, 81

11

Zara covers a square patio with 100 square tiles. Each side has the same number of tiles. How many tiles are along each side?



10 × 10 = 100

Answer 10 tiles

12

A shop stacks cans in a triangle.
There is 1 can in the top row, 2 cans in the next row, and so on.
The bottom row has 7 cans.
How many cans are there altogether?

1 + 2 + 3 + 4 + 5 + 6 + 7

Answer 28 cans

13

A large cube is built from 125 small cubes. How many small cubes are along each edge?

5 × 5 × 5 = 125

Answer 5

14

Find two square numbers that add up to 41.

1, 4, 9, 16, 25, 36

Answer 16 and 25

15

Find a number between 50 and 100 that is a square number and also a cube number.

8 × 8 = 64, 4 × 4 × 4 = 64

Answer 64

16

Tom says the jump between two square numbers next to each other is always an odd number. Is Tom right? Explain how you know.

the jumps are 3, 5, 7, 9, …

they start odd and go up by 2

Answer Yes