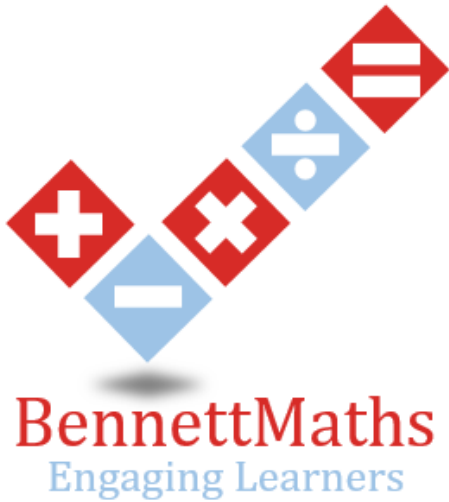


***BennettMaths will be live on TikTok the night before paper 3,  
going through all the predicted papers.***

***Tuesday 9<sup>th</sup> June at 8pm***

Candidate surname

Other names



**Best Guess Paper –  
3F  
Calculator**

Within this booklet you will find my best guess at which topics might be on the third AQA foundation gcse maths paper.

There may be other topics that appear on paper 3, so please ensure that you continue to revise all topics.

The paper consists of 28 questions totalling 80 marks.

**1(a)** Solve  $x + 4 = 9$

**[1 mark]**

Answer \_\_\_\_\_

**(b)** Solve  $3x = 15$

**[1 mark]**

Answer \_\_\_\_\_

**2** Use the digits listed to help answer each part of this question

**0, 1, 2, 6, 9**

**(a)** Use three of the digits to create the largest possible even number

**[1 mark]**

Answer \_\_\_\_\_

**(b)** Use all five of the digits to create the largest possible multiple of 5

**[1 mark]**

Answer \_\_\_\_\_

- 3** The pictogram shows the number of pizza eaten by three cousins during a year.

|               |                                                                                                                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Leo</b>    |    |
| <b>Margot</b> |                                                                                     |
| <b>Oscar</b>  |                                                                                                                                                                                                                                                       |

Key:

 = 4 pizzas

The three cousins ate a total of 26 pizzas over the year.

(a) Complete the pictogram to show this information

**[2 marks]**

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The average cost of each pizza was £6.23

(b) Work out the total cost of the 26 pizzas.

**[2 marks]**

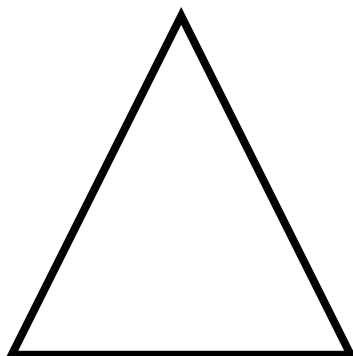
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Answer \_\_\_\_\_

- 4** The shape below is an isosceles triangle.



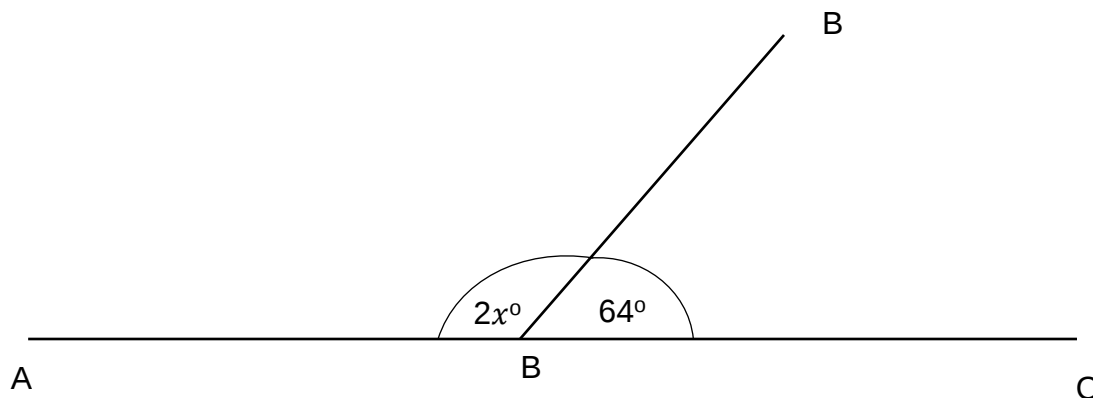
- (a) Write down the total number of lines of symmetry that the shape has **[1 mark]**

Answer \_\_\_\_\_

- (b) Write down the total number of lines of symmetry that an equilateral triangle has **[1 mark]**

Answer \_\_\_\_\_

- 5**  $AC$  and  $BD$  are two straight lines.



Work out the value of  $x$

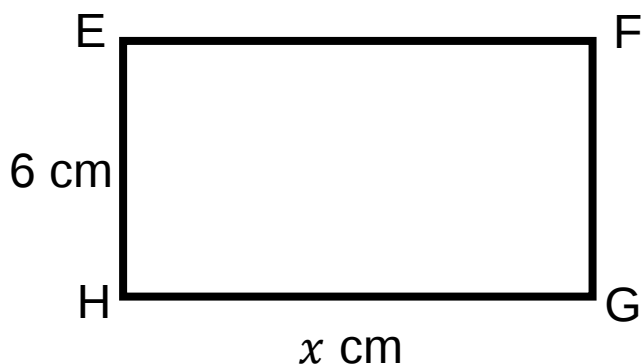
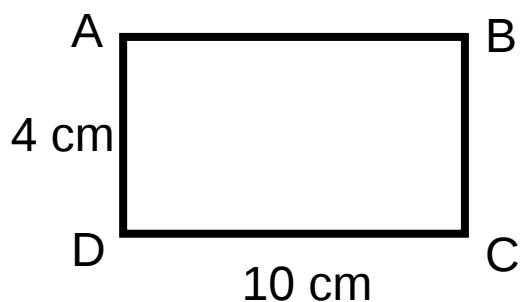
**[2 marks]**

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Answer \_\_\_\_\_

- 6** ABCD and EFGH are similar rectangles.



Work out the value of  $x$

[2 marks]

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Answer \_\_\_\_\_

**7(a)** Simplify  $10^4 \times 10^5$

**[1 mark]**

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Answer \_\_\_\_\_

**7(b)** Simplify  $10^4 \div 10^5$

**[1 mark]**

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Answer \_\_\_\_\_

**7(c)** Work out  $500 \times 20 \times 10^3$ . Give your answer as a power of 10.

**[2 marks]**

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Answer \_\_\_\_\_

- 8** The frequency table below shows the favourite sport of 45 students

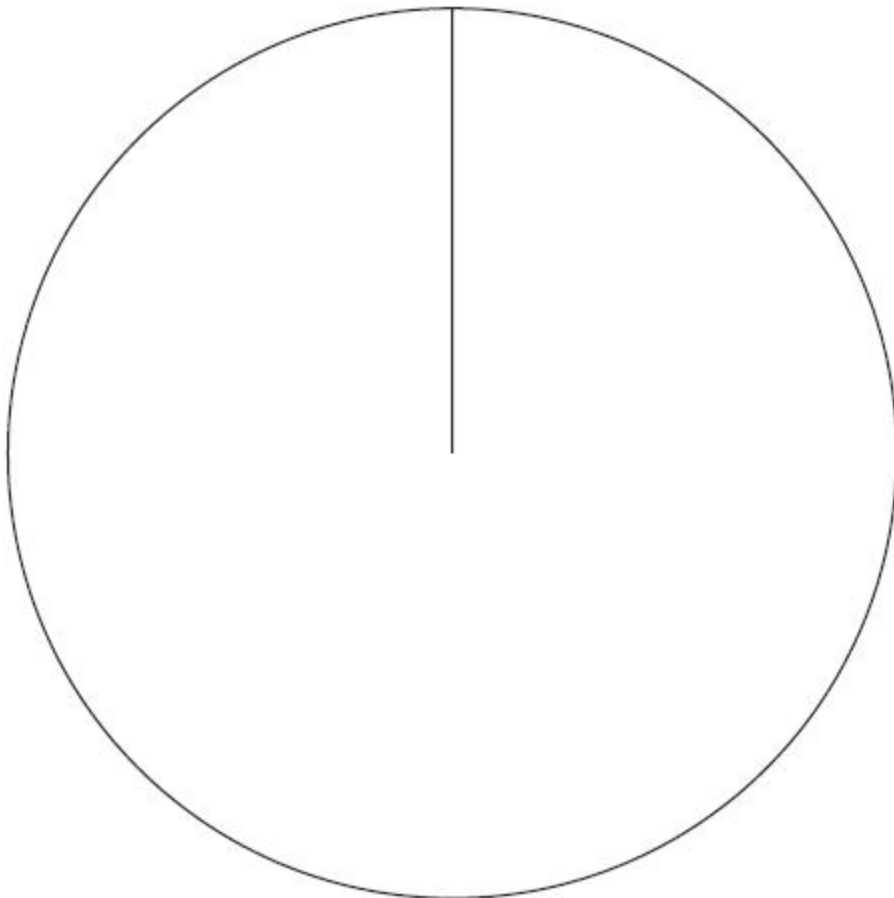
| Sport      | Frequency |
|------------|-----------|
| athletics  | 13        |
| cycling    | 17        |
| swimming   | 8         |
| gymnastics | 7         |

Draw an accurate pie chart to represent this information

**[3 marks]**

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**9** Leo buys 10 Pokémon cards for £75

He sells 6 of the cards for £10.50.

He sells the remaining cards for £27.

Work out the percentage profit that Leo made.

**[4 marks]**

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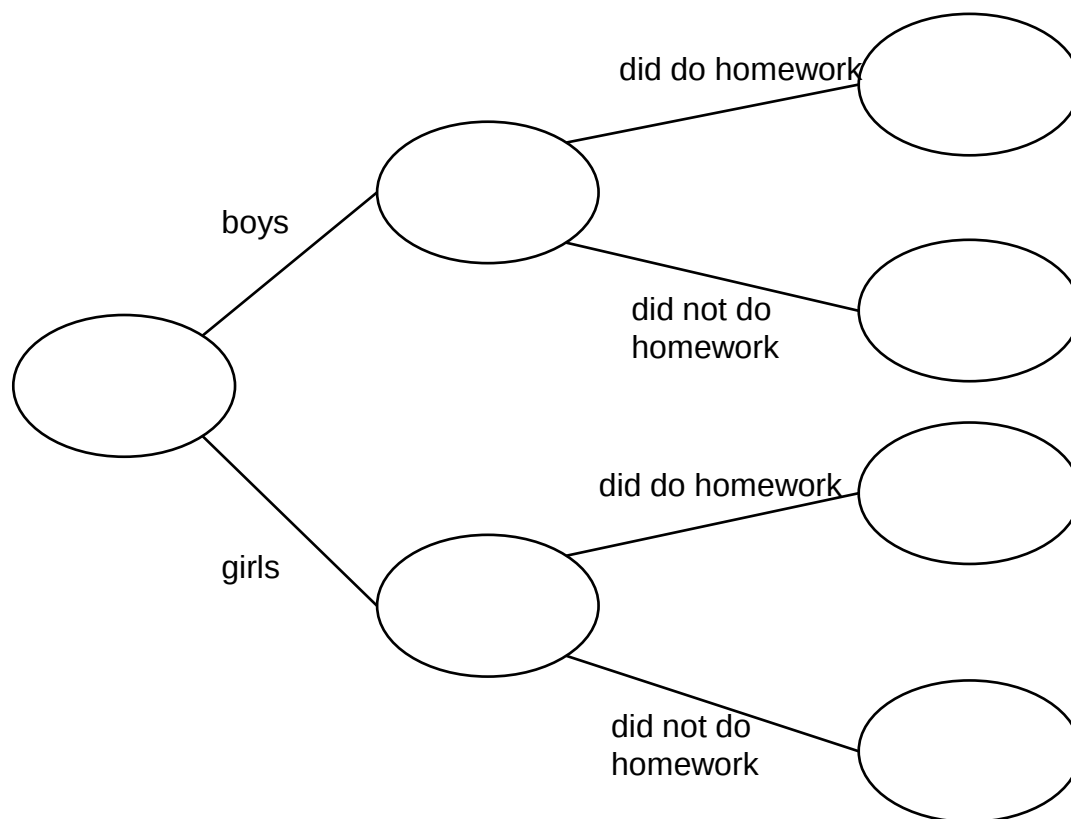
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Answer \_\_\_\_\_

- 10** 360 students have some homework.  
195 of the students were boys.  
12 of the 49 students that did not do their homework were girls.

(a) Use this information to complete the frequency tree.

**[3 marks]**



- (b) One of the boys is chosen at random.  
Write down the probability that they did do their homework

**[2 marks]**

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Answer \_\_\_\_\_

- 11** Using a calculator, work out the value of

$$\sqrt[3]{\frac{4.3 \times \sin(45)}{9.3^2}}$$

- (a) Write down all the numbers on your calculator display

**[2 marks]**

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Answer \_\_\_\_\_

- (b) Round your answer to part (a) to 3 significant figures

**[1 mark]**

Answer \_\_\_\_\_

- 12** The circumference of a circle is  $24\pi$ .

Work out the length of the radius of the same circle

**[2 marks]**

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Answer \_\_\_\_\_

**13** Convert  $150\text{cm}^2$  into  $\text{mm}^2$

**[2 marks]**

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Answer \_\_\_\_\_

**14**  $Z = 2p^2 + 3p - 5$

**[3 marks]**

Work out the value of  $Z$  when  $p = -4$

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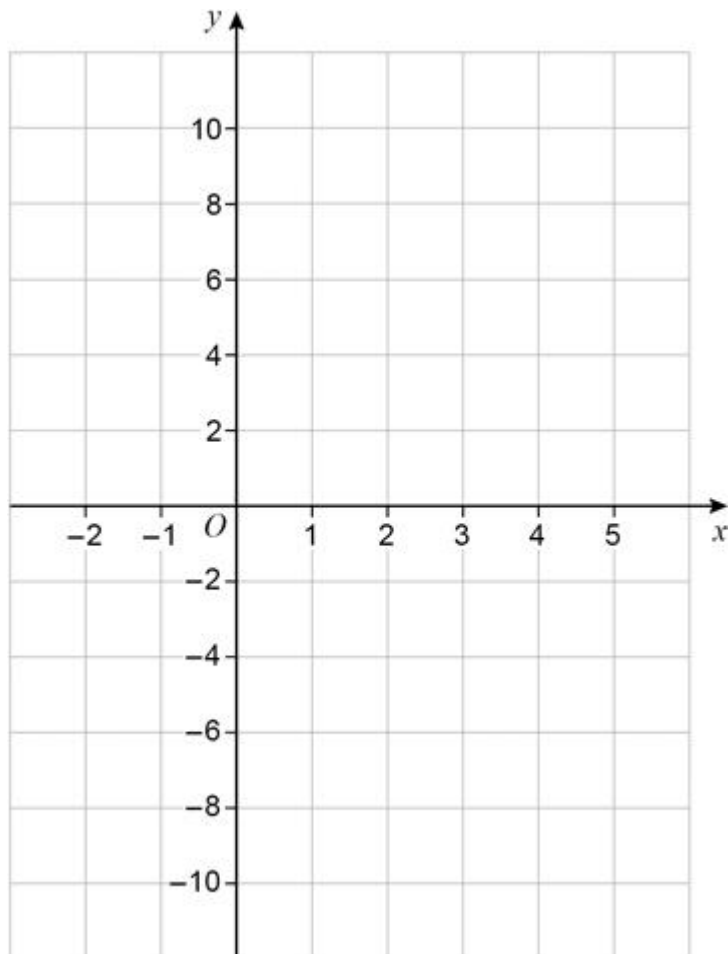
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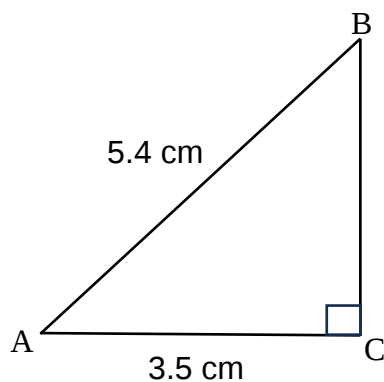
Answer \_\_\_\_\_

- 15** On the grid, draw the graph of  $y = 2x - 6$  for values of  $x$  from  $-2$  to  $5$

**[3 marks]**



- 16** The right-angled triangle ABC has been drawn below.  
AB = 5.4 cm  
AC = 3.5 cm



Work out the length of BC.  
Give your answer correct to 2 decimal places.

**[3 marks]**

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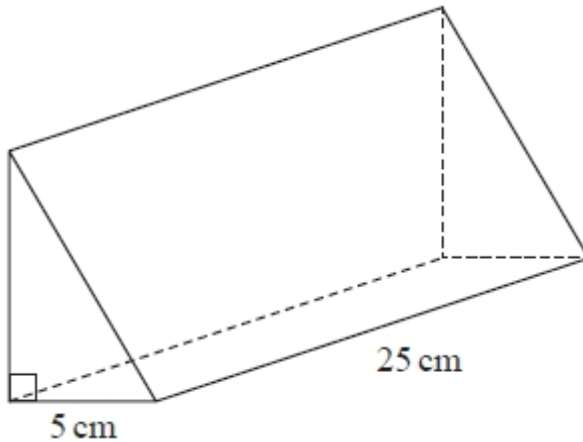
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Answer \_\_\_\_\_

**17** The diagram shows a prism.



The cross section of the prism is a right-angled triangle.

The base of the triangle has length 5 cm

The prism has length 25 cm

The prism has volume  $750 \text{ cm}^3$

Work out the height of the prism.

**[3 marks]**

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Answer \_\_\_\_\_

**18** Use a word from the list below to complete each sentence.

Arc

Chord

Circumference

Diameter

Radius

Sector

Segment

Tangent

The \_\_\_\_\_ is half the length of the diameter. **[1 mark]**

The \_\_\_\_\_ is the region created by drawing a chord through a circle. **[1 mark]**

The \_\_\_\_\_ is a section of the circumference. **[1 mark]**

**19**

Make  $x$  the subject of

$$\frac{3x + y}{b} = a$$
 **[2 marks]**

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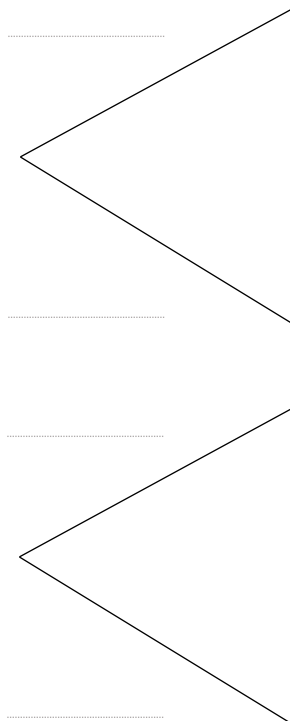
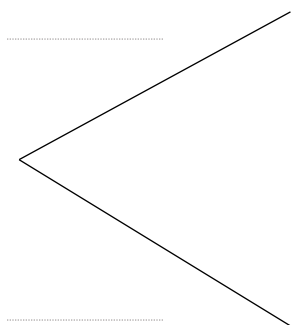
Answer \_\_\_\_\_

- 20** Margot is going to play one game of snooker and one game of pool.  
The probability that Margot wins a game of snooker is 0.9.  
The probability that Margot does not win a game of pool is 0.3.

Snooker

Pool

**[2 marks]**



- (b) Work out the probability that Margot wins at both snooker and pool.

**[2 marks]**

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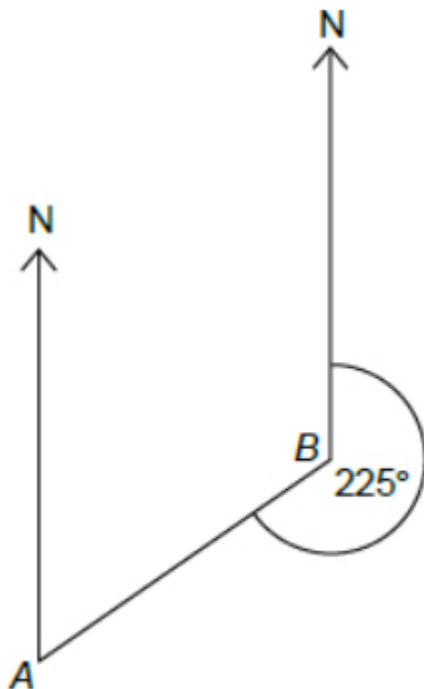
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Answer \_\_\_\_\_

**21** The bearing of A from B is  $225^\circ$



**[2 marks]**

Work out the bearing of B from A

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Answer \_\_\_\_\_

**22**    Expand and simplify     $3(2x + 1) - 4(x - 5)$     **[2 marks]**

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Answer \_\_\_\_\_

**23**    The surface area of a cube is  $150\text{cm}^2$   
Work out the length of the cube    **[3 marks]**

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Answer \_\_\_\_\_

- 24** A number,  $n$ , is rounded to 2 significant figures.  
The result is 2.3  
Complete the error interval for  $n$

**[2 marks]**

$$\text{.....} \leq n < \text{.....}$$

- 25** Frankie travels 400km in 4 hours and 45 minutes.

**[2 marks]**

Work out his average speed, giving your answer as a decimal.

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Answer .....

**26** Solve algebraically

**[3 marks]**

$$3x + 2y = 19$$

$$7x - 2y = 31$$

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Answer \_\_\_\_\_

**27**

**(a)** Express 30 as a product of primes

**[2 marks]**

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Answer \_\_\_\_\_

**(b)** Write down the highest common factor (HCF) of 30 and 45

**[1 mark]**

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Answer \_\_\_\_\_

**(c)** Write down the lowest common multiple (LCM) of 30 and 45

**[1 mark]**

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Answer \_\_\_\_\_

28

Match each sequence to its description

[4 marks]

1,1,2,3,5

Arithmetic progression

4,9,14,19,24

Geometric progression

1,3,9,27,81

Square numbers

1,8,27,64,125

Cube numbers

Fibonacci sequence