Year 2 - SATs Mathematics Workshop

Year 2 Tests or SATs

- The SATs consist of up to six tests.
- Two for Mathematics, two for Reading and two for Spelling and Grammar.
- All children are expected to sit all, if not most of the tests. Some children may be exempt from some or all of the tests.
  (This is only done in extraordinary situations and the ultimate decision for this lies with the Head Teacher, Mrs Wheeler).
- We have not seen this year's tests, as they are confidential until the end of May.
- We do not know the pass mark for the tests. This is released in June after everyone in the country has completed the tests.

Mathematics Workshop

- During this workshop we will explore the types of questions that the children might encounter.
- We have chosen the questions from previous test papers.
- For the arithmetic questions, we have chosen a range of questions where we can demonstrate and explore the strategies that we teach the children ready for the SATs. We do teach the children other methods and make links; however, these are the efficient methods the children need in order to complete the tests.
- For the reasoning questions, we have chosen the most '*memorable*' questions, or the ones that the children found challenging in the past.
- All the skills shown are transferable and not just for the SATs.

Concrete Pictorial Abstract

- When learning concepts or strategies in mathematics we go through the concrete – pictorial – abstract approach with the children.
- We started this process at the start of Year 2 – which why some of your children might have found it easy.
- However, it gives them a grounded understanding of mathematics.
- This process is recognised and used by many at an international level.

Mathematics Workshop

- The workshop is interactive! You will be shown what strategies or methods to use, and then you will get a chance to have a go.
- It is a good opportunity for you to see what the SATs questions are like, as some can be a quite tricky or worded in an unusual way.
- We do not know what this year's test will look like. However, we do have the previous tests to look at.
- Please don't feel anxious or nervous. Maths should always be fun!

The Workshop Materials

- You should all have a copy of this booklet.
- This is yours to keep and make notes on.
- All the materials, including this PowerPoint will be made available on our website after this workshop.
- Previous test papers are available via the link on our website.

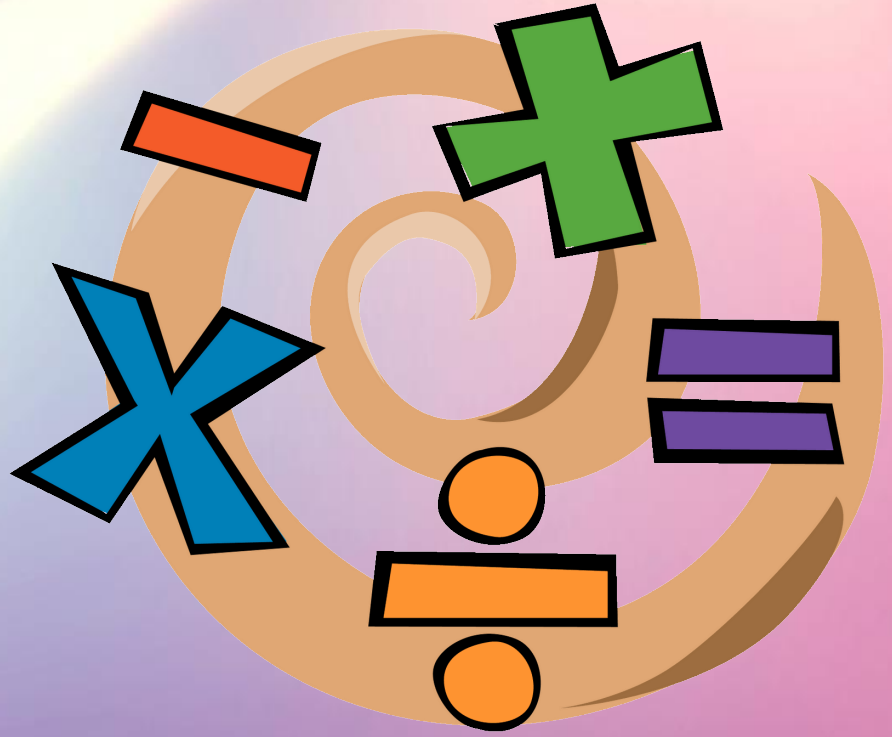

Walter Infant School

To be the best I can be

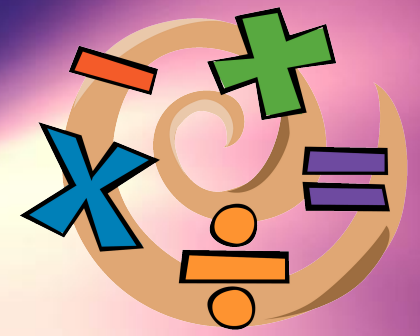
Year 2 - SATs Mathematics Workshop Materials

Page 1

Year 2 Mathematicians



Paper One - Arithmetic



- Paper one is an arithmetic paper which consists of 25 questions.
- These can range from any of the four operations (addition, subtraction, multiplication and division), finding missing numbers in a calculation or finding the fraction of a number.
- All the questions are based on objectives for Mathematics from the National Curriculum.
- It is not time; however, according to the guidance the children are expected to complete the paper in 20 minutes. Don't worry we will give the children more time if needed.
- The only equipment they are allowed to have is a pencil and a ruler.
- They do not have any other resources to help with counting or calculating.

1

$2 + 7 = \ldots\ldots\ldots$

1 mark

2

$37 + 5 = \ldots\ldots\ldots$

1 mark

3

$32 + 27 = \ldots\ldots\ldots$

1 mark

4

17 + 48 = ...

1 mark

5

9 - 5 = ...

1 mark

6

35 - 8 = ...

1 mark

7

68 - 25 = ...

1 mark

8

73 - 28 = ...

1 mark

9

$3 + 30 + 6 = \ldots\ldots\ldots$

1 mark

10

$7 \times 5 = \ldots\ldots\ldots$

1 mark

11

10 x 8 = ...

1 mark

12

$9 \times 2 = \ldots\ldots\ldots$

1 mark

13

$21 \div 3 = \ldots\ldots\ldots$

1 mark

14

$12 \div 2 = \ldots\ldots\ldots$

1 mark

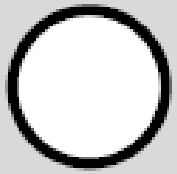
15

$40 \div 5 = \ldots\ldots\ldots$

1 mark

16

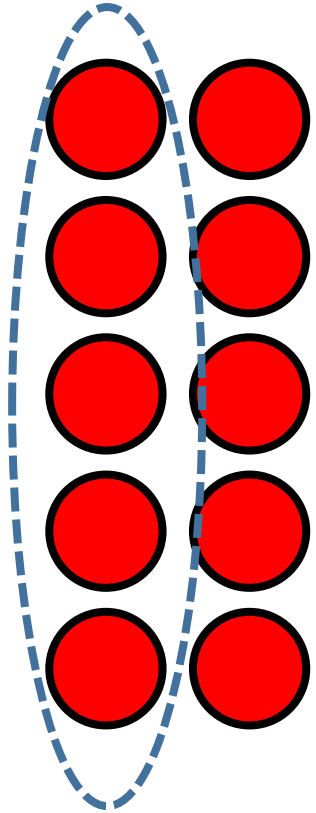
$18 \div 3 = \ldots\ldots\ldots$



1 mark

17

$\frac{1}{2}$ of 12 = ...



1 mark

18

$\frac{3}{4}$ of 20 = ...

1 mark

19

$\frac{1}{3}$ of 15 = ...

1 mark

20

14 + ... = 29 we need to -

or

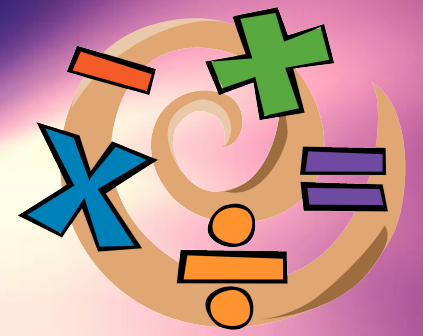
..... - 14 = 7 we need to +

or

35 - ..... = 14 we need to -

1 mark

Paper Two - Reasoning



- Paper two is a reasoning paper which consists of 32 questions.
- All the questions are based on a range of objectives for Mathematics from the National Curriculum.
- It is not time; however, according to the guidance the children are expected to complete the paper in 35 minutes. Don't worry we will give the children more time if needed.
- The only equipment they are allowed to have is a pencil, a mirror and a ruler.
- They do not have any other resources to help with counting or calculating.

RUCSAC

READ

Read the word problem.

UNDERLINE

Underline the numbers and important information.

CHOOSE

Choose the correct operation and write the number sentence.

23 + 12 =

SOLVE

Solve the calculation using a method you know well.

ANSWER

Answer the calculation.

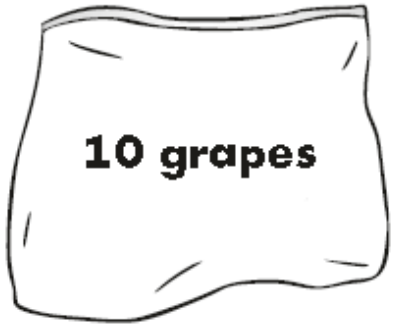
CHECK

Check through your work to ensure that it is correct.

0 1 2 3 4 5 6 7 8 9

Ben has **7** bags of grapes.

Each bag has **10** grapes.



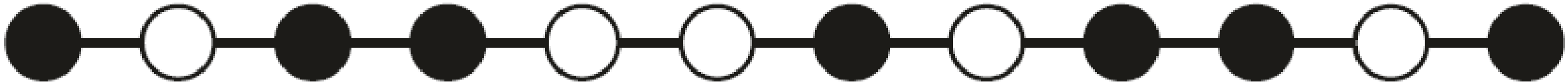
Ben gives **25** grapes to his friends.

How many grapes does he have **left**?

Show your working

grapes

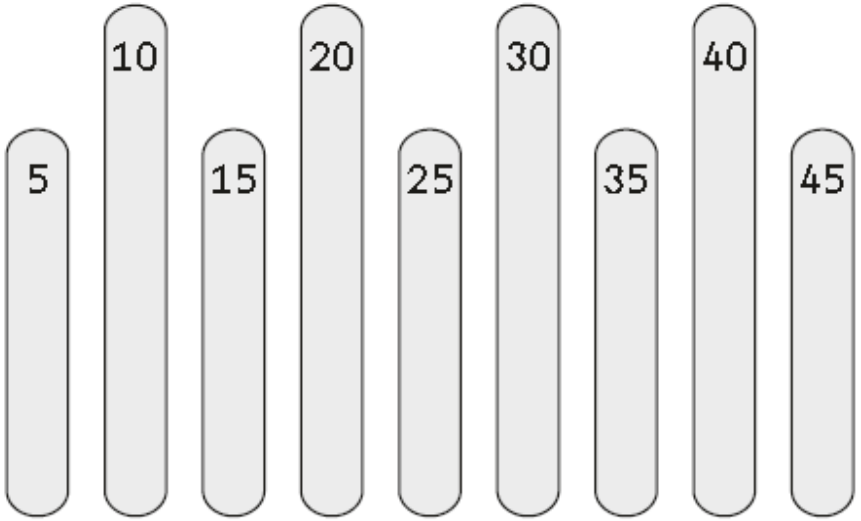
Put a tick below the **fourth black bead**.



Kemi makes a pattern with sticks.

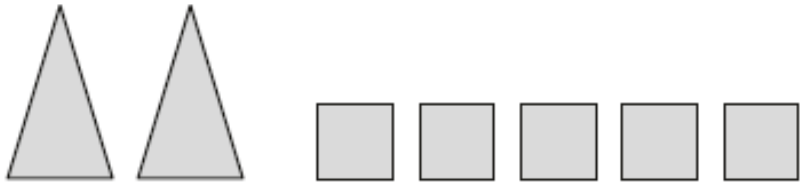
Some are long and some are short.

She writes a number pattern on the sticks.

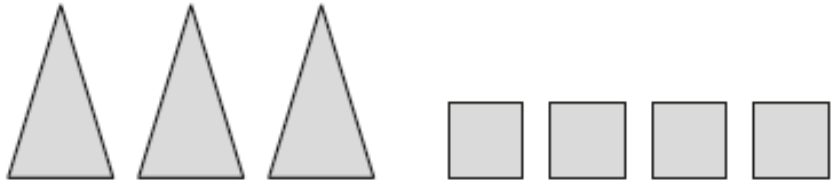


Write the number that will be on the next **short** stick.

Amy makes **25** using different shapes for tens and ones.

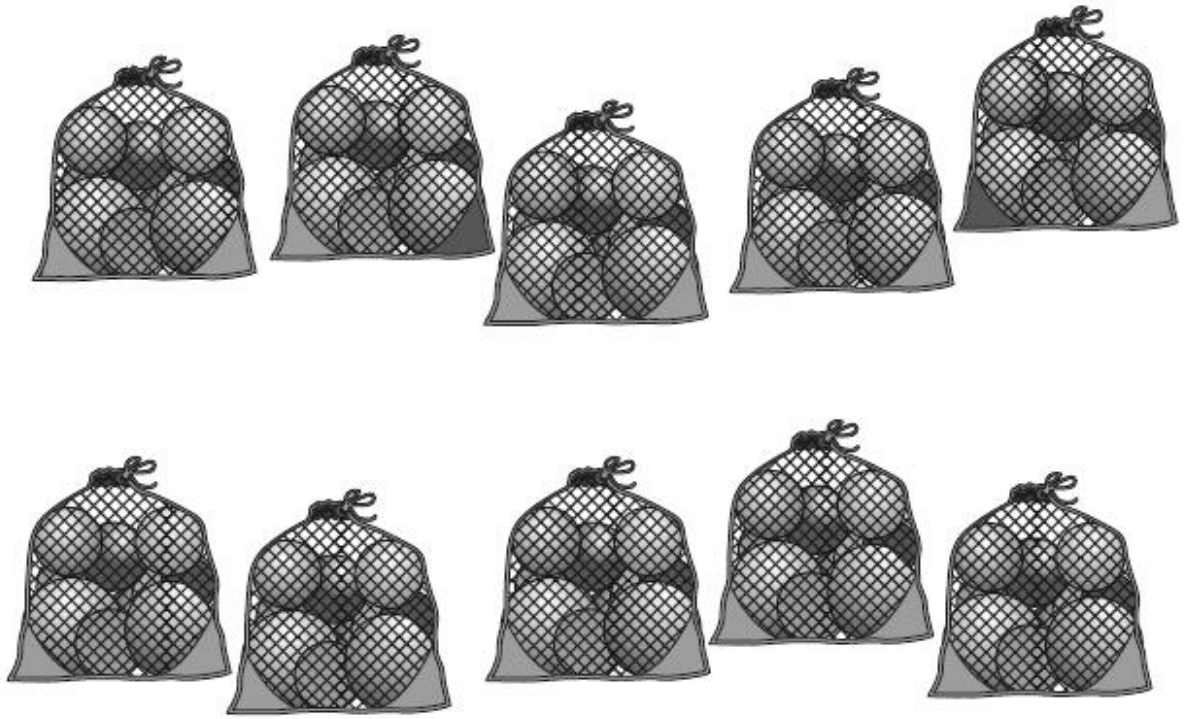


Amy makes a new number.



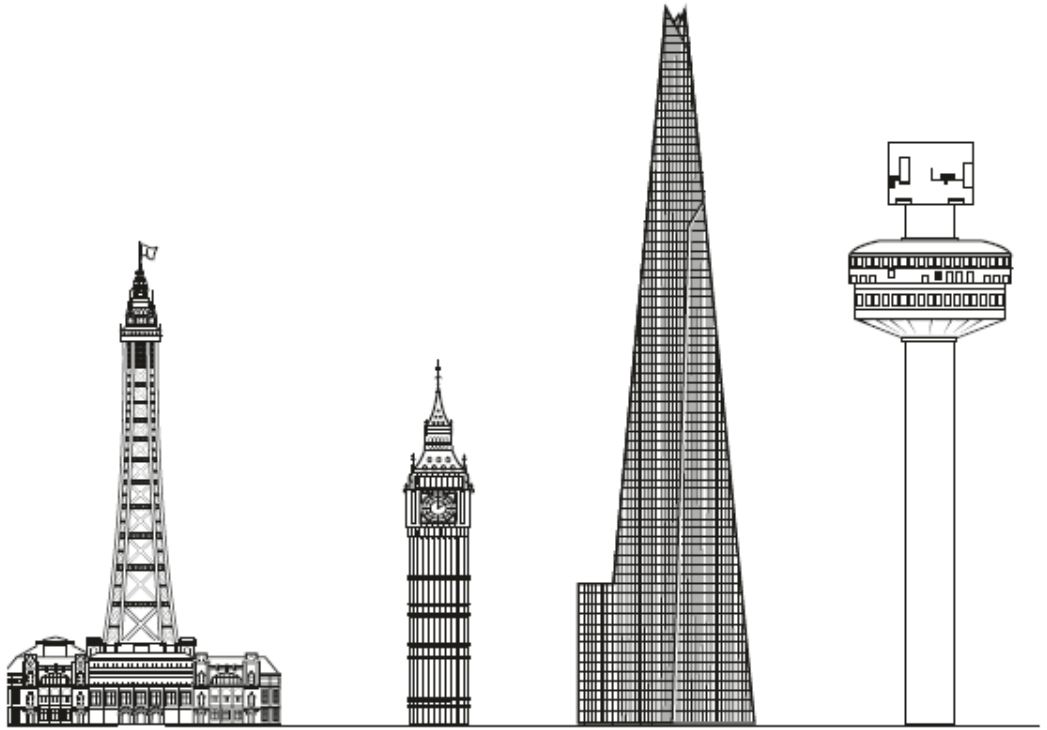
What is Amy's new number?

Sita puts **10** balls in each bag.



How many balls are in the bags **altogether**?

balls



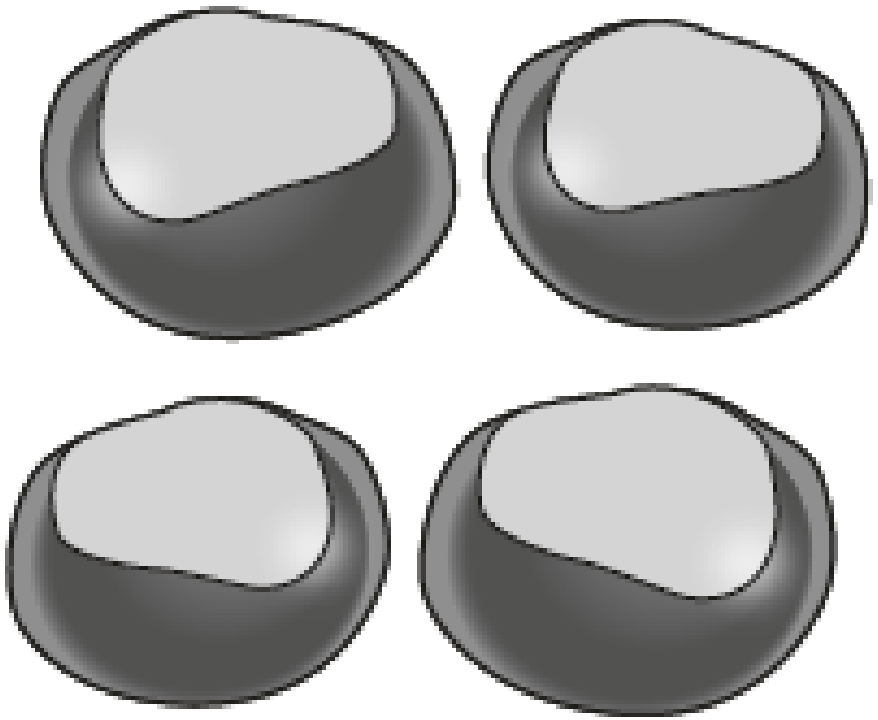
Put the four towers in order from **tallest** to **shortest**.

One is done for you.

	D		
tallest			**shortest**

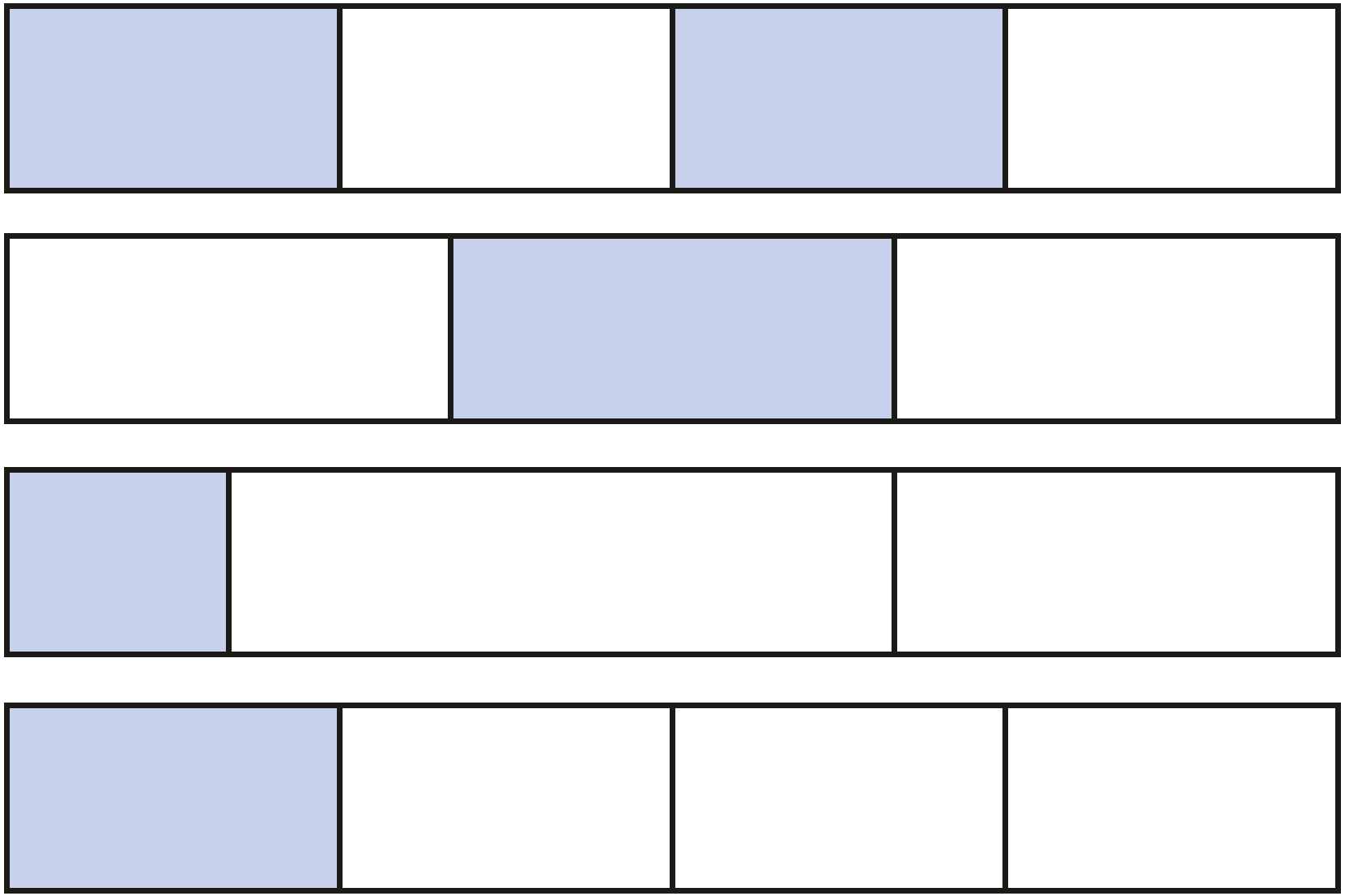
Ajay, Sam and Kemi have 4 conkers each.

How many conkers do they have **altogether**?



conkers

Tick the shape that has exactly $\frac{1}{3}$ shaded.

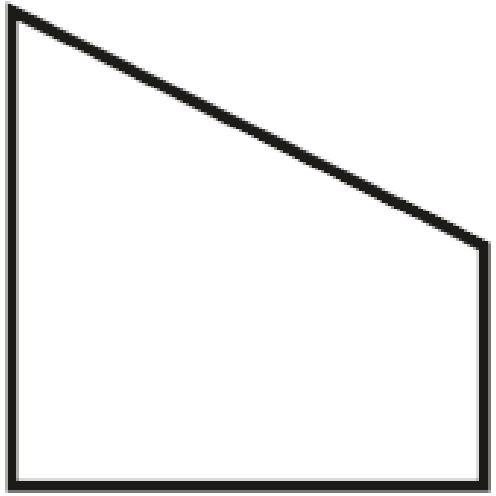


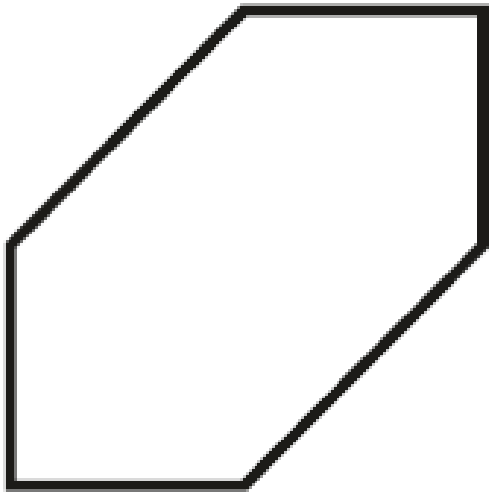
Look at these coins:

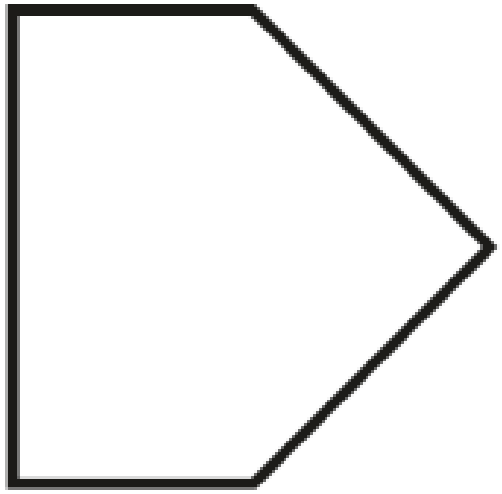
What is the largest amount you can make using **three** of these coins?

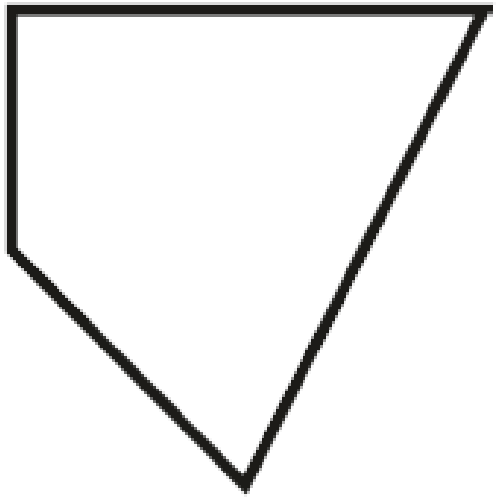
p

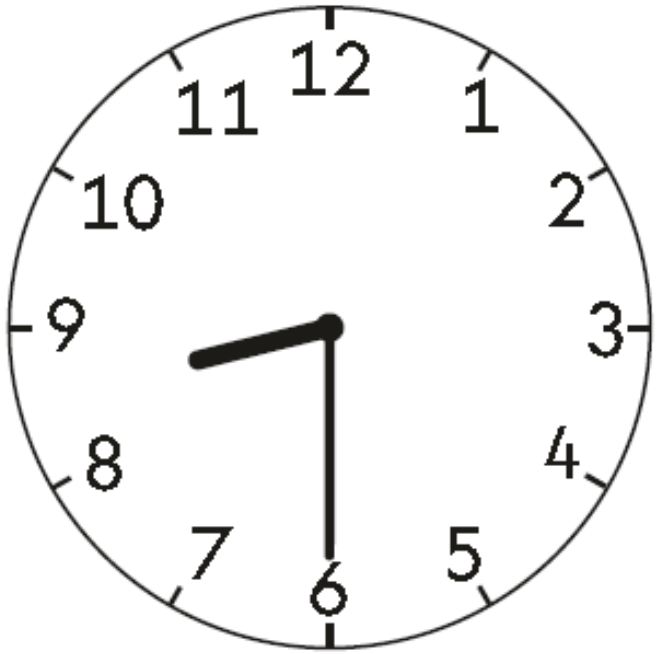
Tick the **pentagon**.











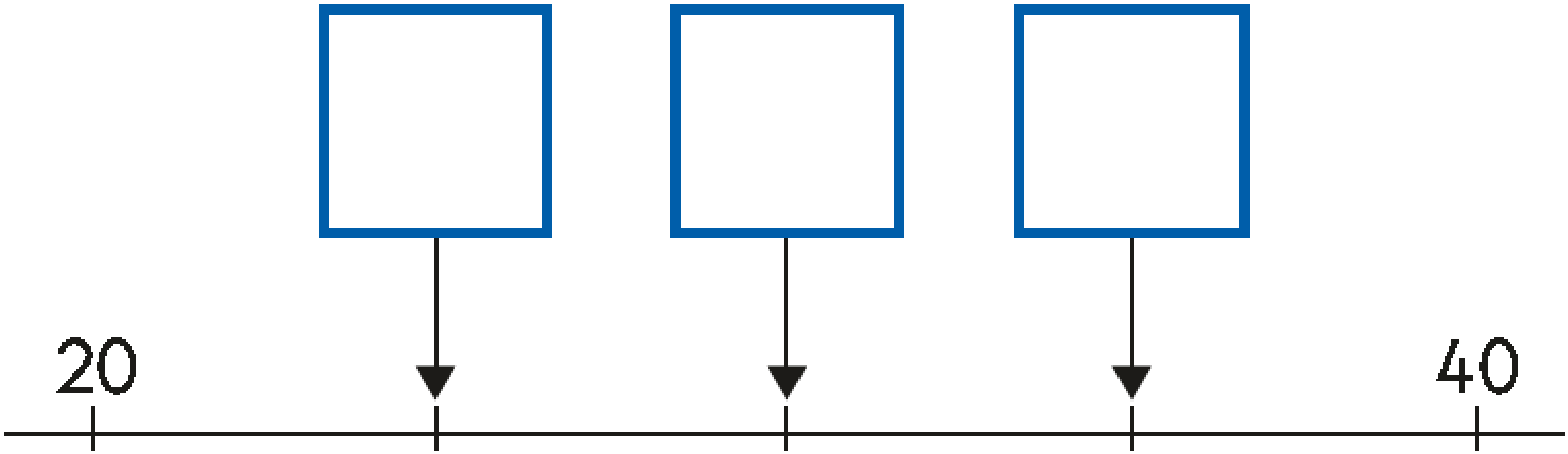
What time does the clock show?

Tick the correct box.

twenty to 6	half past 9
half past 8	quarter to 6

The numbers on this number line go up by the **same amount** each time.

Write the missing numbers in the boxes.



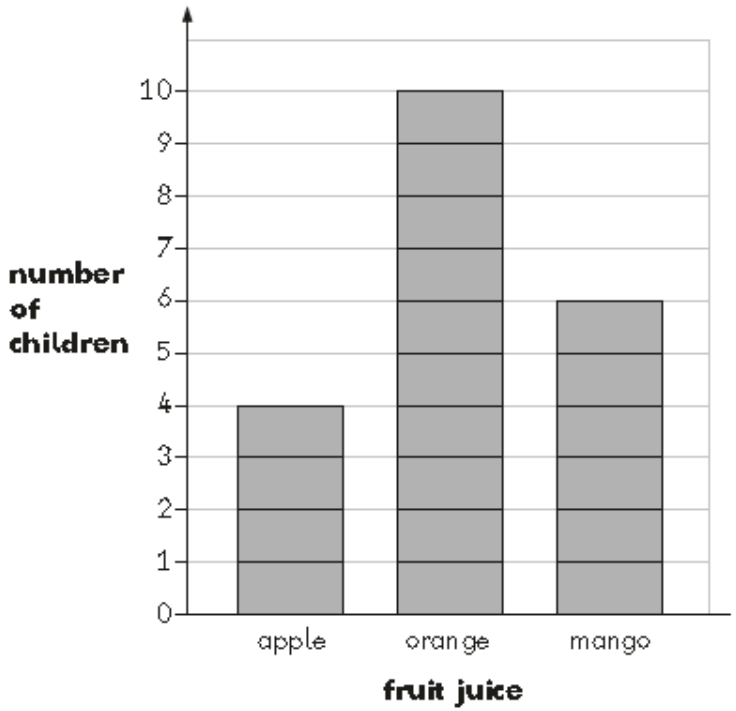
Write these numbers in order, starting with the smallest.

73 37 76 36 63

smallest **largest**

20 children choose their favourite fruit juice.

The chart shows the results.



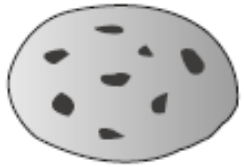
(a) How many **more** children choose orange than apple?

children

(b) Another boy joins the group.

He chooses **mango** juice.

Add this information to the chart.



biscuits	cakes
20p each	**25p** each

Sam buys **3** biscuits and **1** cake.

How much does Sam spend **altogether**?

Show your working

p

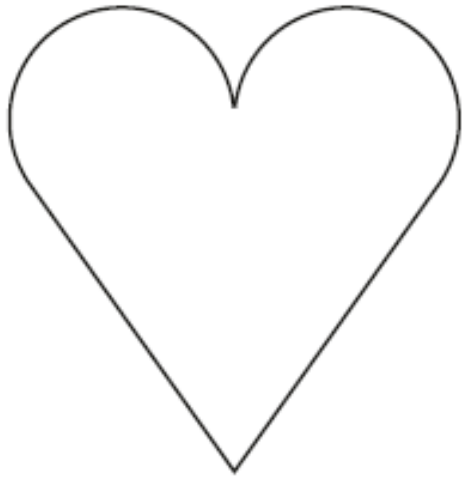
A shopkeeper has **20** fish and **5** fish bowls.

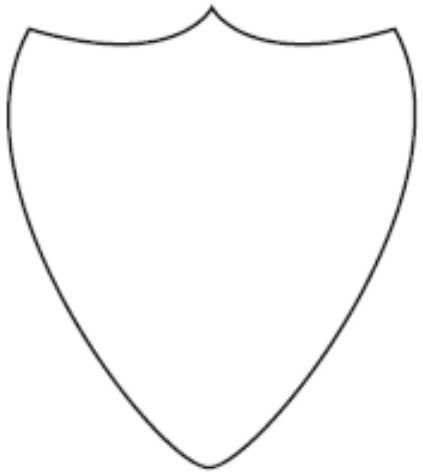
He puts the same number of fish in each bowl.

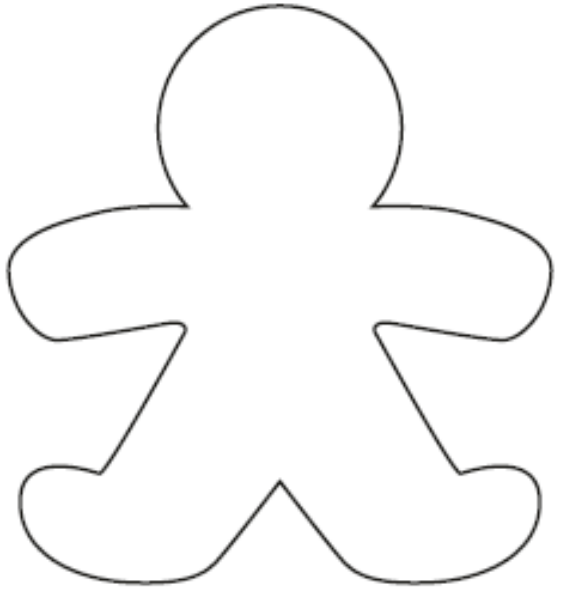
How many fish go in each bowl?

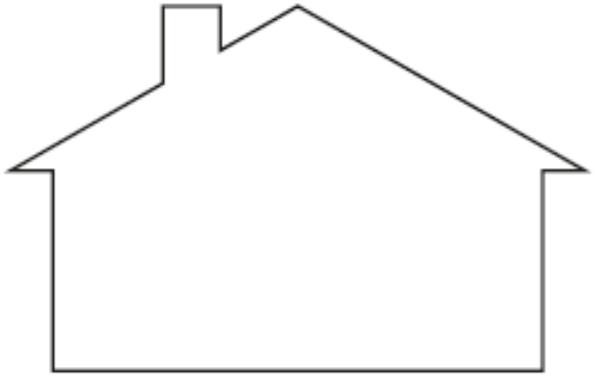
fish

Tick the shape that does **not** have a line of symmetry.









There are **55** cakes.

20 boys and **19** girls each take a cake.

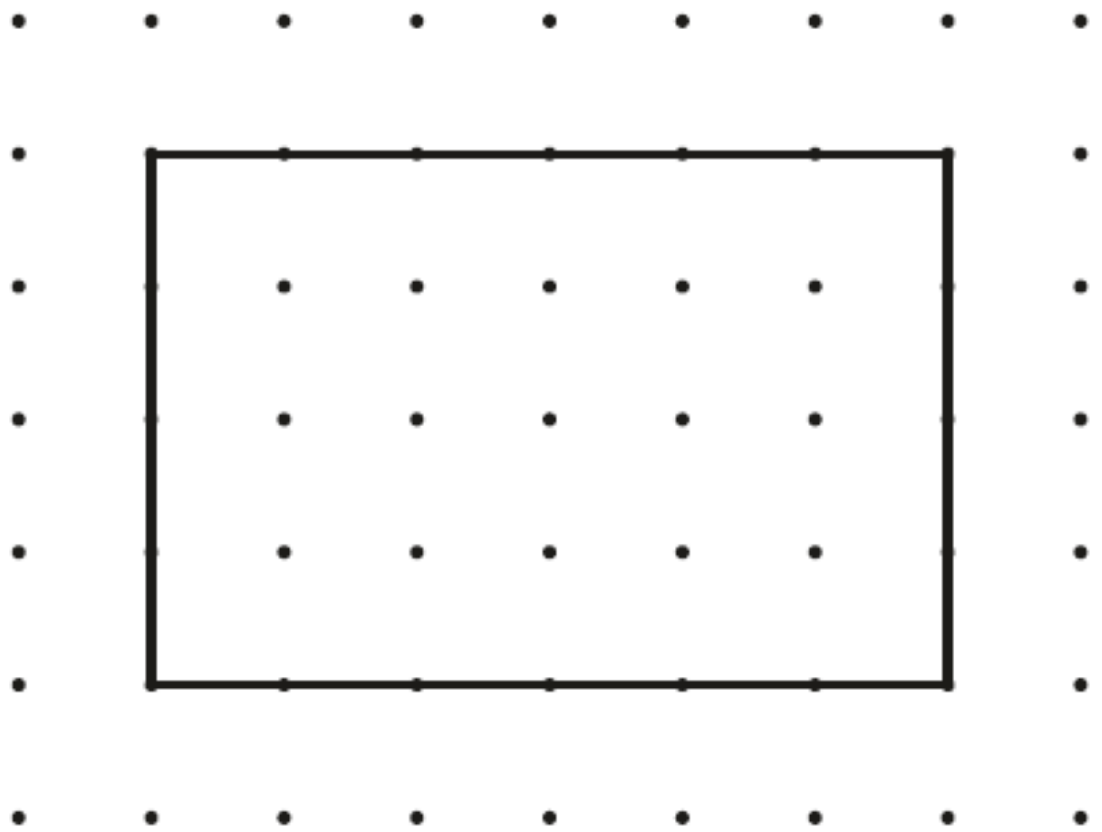
How many cakes are **left**?

Show your working

cakes

Draw lines to divide the rectangle into quarters.

Use the dots to help you.



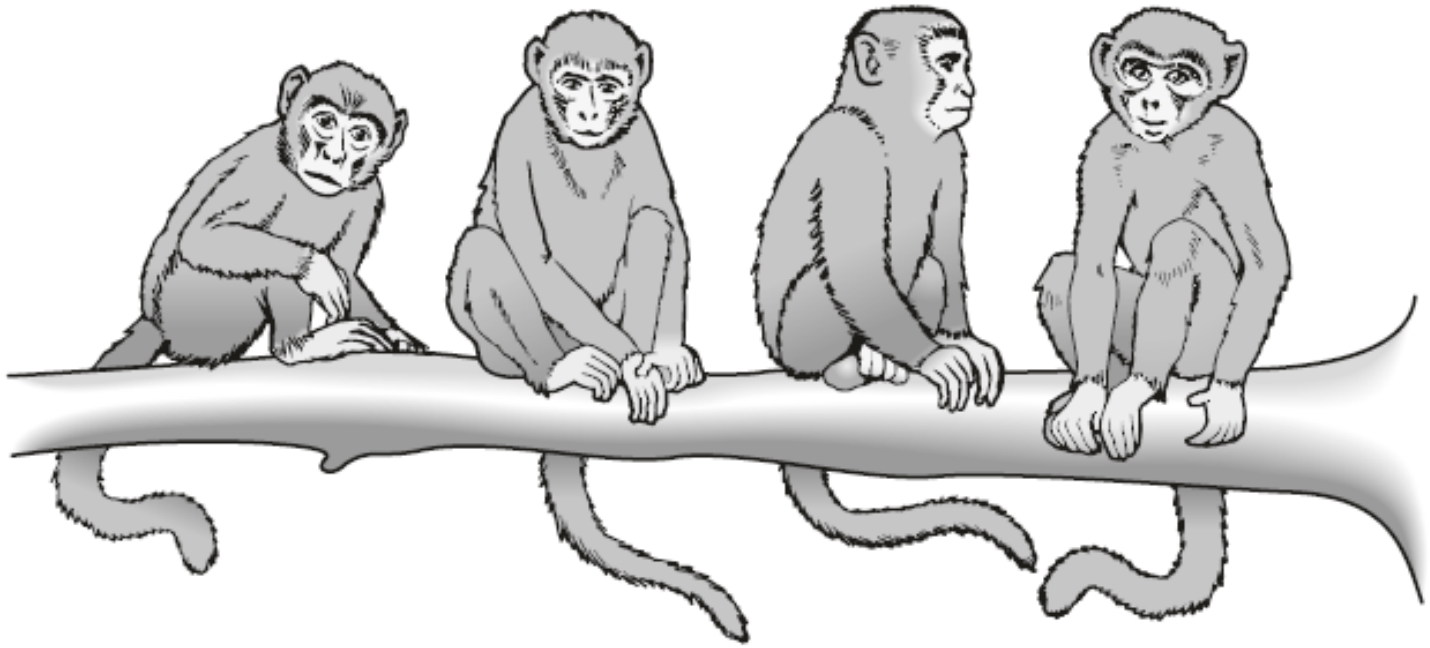
Circle the **two** numbers that are even.

73 58

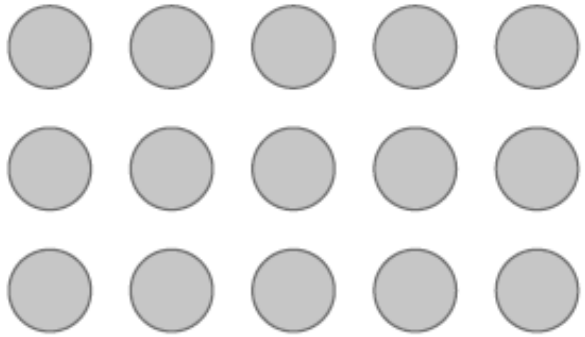
64 45

20 bananas are shared equally among **4** monkeys.

How many bananas does **each** monkey get?



bananas



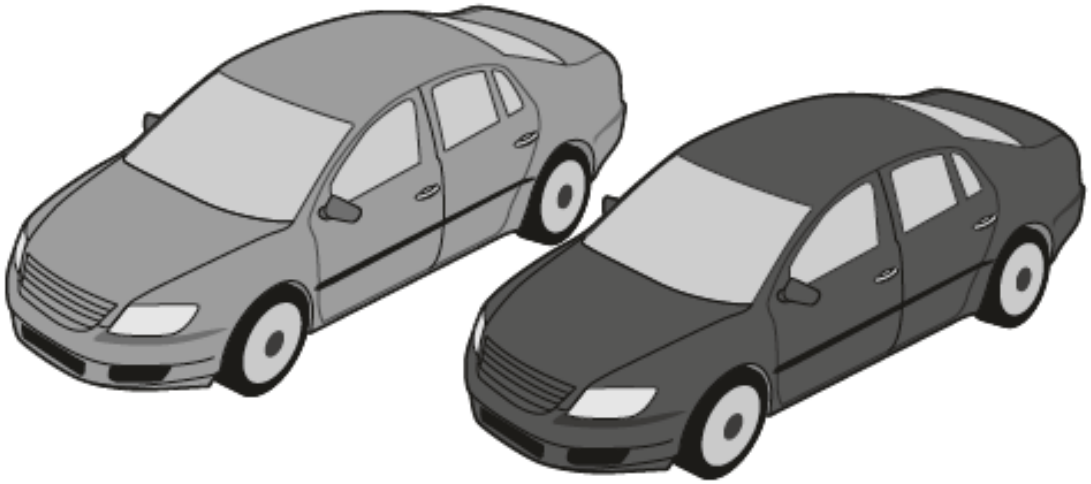
Look at the array of circles.

Now look at the four calculations. [Pause]

Tick the calculation that describes the array. [Pause]

$5 + 3$
$5 - 3$
$5 + 5$
5×3

Ben and Sita count cars.



Ben counts **38** red cars.

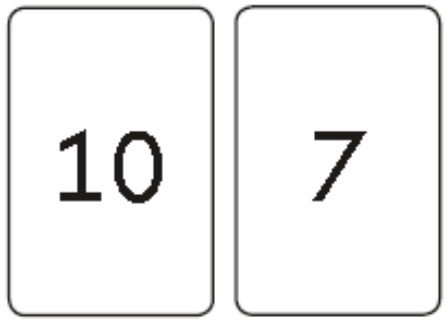
Sita counts **23** blue cars.

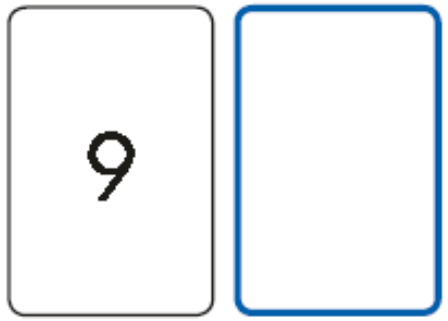
How many cars do they count **altogether**?

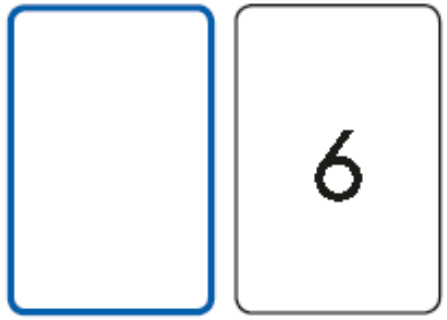
cars

Fill in the missing numbers to make each pair of cards **total 17**

One pair is done for you.







A game costs £25

Ben has £19

How much **more** money does Ben need to buy the game?

£

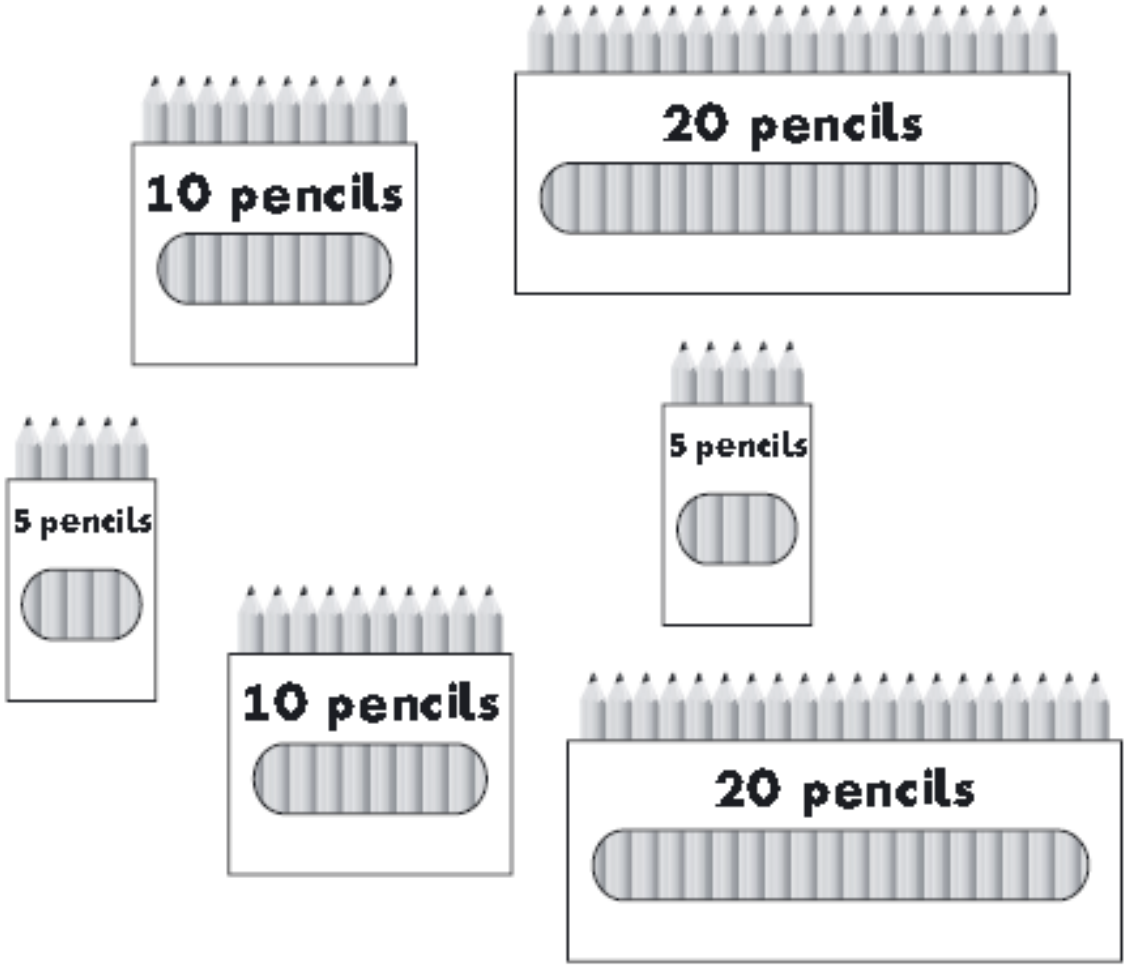
Here are some signs.

>	<	=

Write the correct sign in each box.

$10 + 5 \square 10 \times 5$

$2 \times 6 \square 6 + 6$



Kemi and Ben share these pencils equally.

How many pencils do they each get?

pencils

Draw a rectangle **7cm** long and **3cm** wide.

Use a ruler.

5	40	8

Use only these numbers to make a **different** number sentence each time.

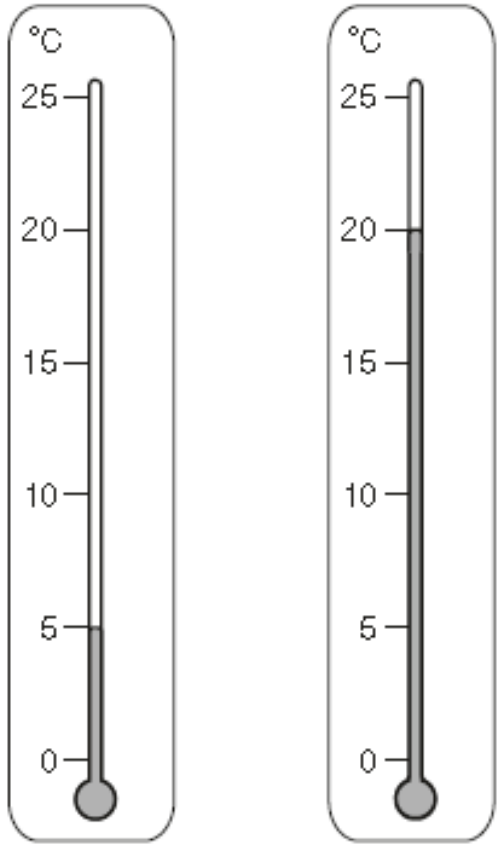
One is done for you.

$$5 \times 8 = 40$$

$$\square \times \square = \square$$

$$\square \div \square = \square$$

Look at the thermometers.



playground **classroom**

The temperature on the playground is lower than the temperature in the classroom.

How much lower?

°C

13

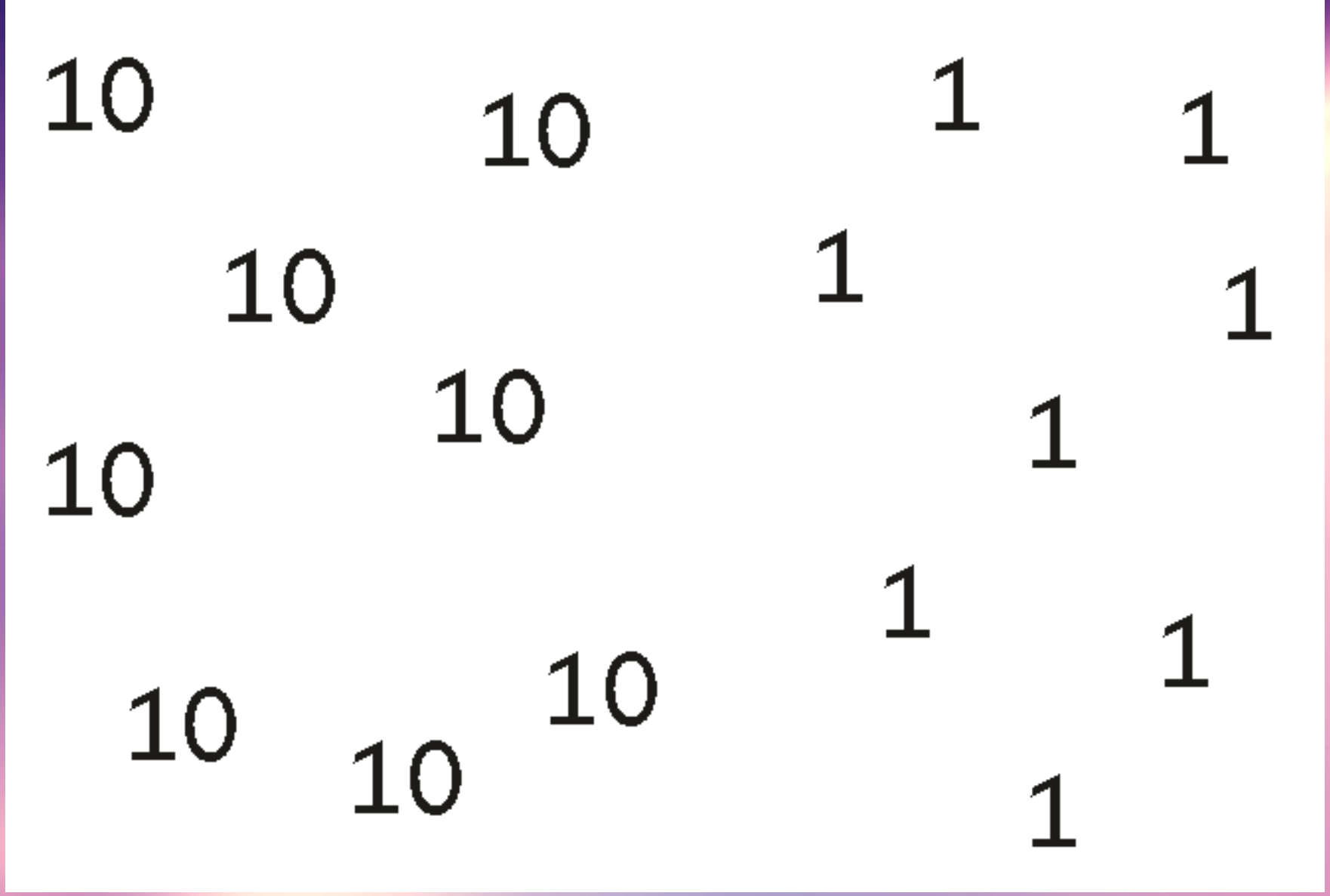
There are thirteen marbles in a jar.

The jar can hold twenty marbles.

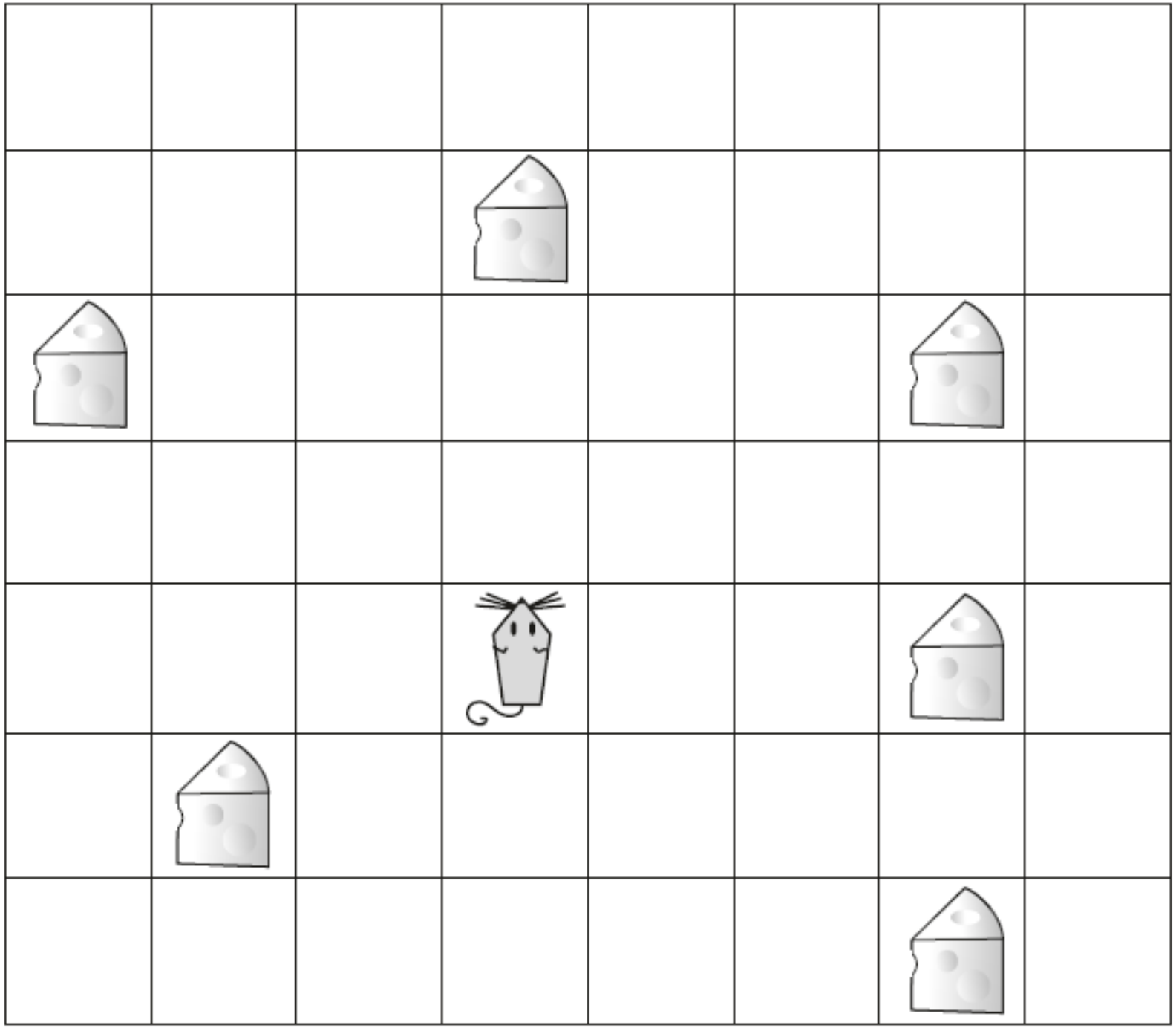
How many more marbles can fit in the jar?

Write your answer in the box.

marbles



Circle the correct number of tens and ones to make sixty-three.



Look at the mouse.

Ajay moves the mouse to a piece of cheese.

He moves the mouse two squares forward. [Pause]

He then turns the mouse a quarter of a turn clockwise and moves it forward three squares. [Pause]

Circle the piece of cheese the mouse lands on.

20

30

Write down <u>all</u> the odd numbers between twenty and thirty.

And Finally, Are There Any Questions?