Monday 3rd February
Morning Challenge

1. w_m_n
2. co_s_i_n_e
3. sh_ _ lder
4. l _ _ _ t _ ing
5. _ q u _ p _ _ d
6. _ _ _ gram _ _
7. re _ o _ _ _ _ _

Challenge – Use each word in a sentence containing an adverbial phrase.

3 in 3   Daily 10 - Mental Maths Challenge - Topmarks

1. 5989 x 17 =

2. 288 ÷ 18 =

3. Sam has 1,234,346 pieces of Lego. He uses 345,920 pieces to build a stadium and 45,987 pieces of Lego to build a park. How many pieces has he used? How many pieces does he have left?
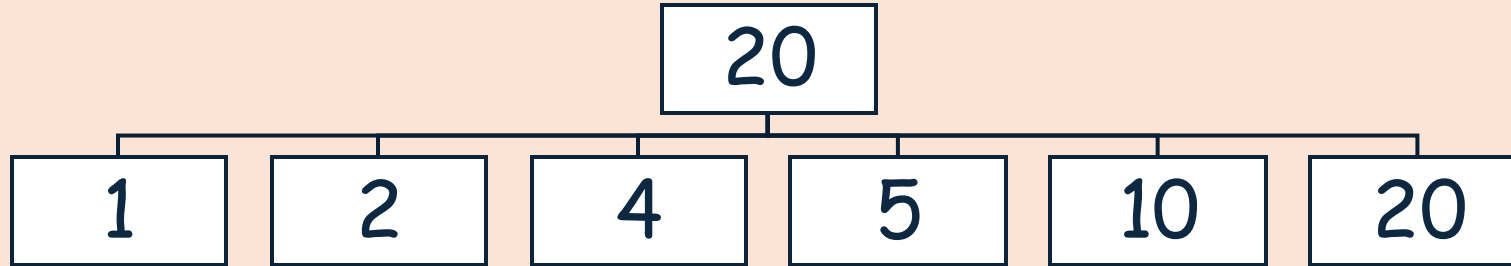
Challenge – 20 is the answer. What is the question? (It must include a fraction, decimal or percentage)

TBAT: Identify common factors and common multiples

A factor of a number is any amount that divides into that number exactly, leaving no remainder.

For example, 6 is a factor of 30 because it goes in 5 times (6 x 5= 30)

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                    ┌──────┐
                    │  20  │
                    └──────┘
   ┌──────┬──────┬──────┼──────┬──────┐
┌─────┐┌─────┐┌─────┐┌─────┐┌─────┐┌─────┐
│  1  ││  2  ││  4  ││  5  ││ 10  ││ 20  │
└─────┘└─────┘└─────┘└─────┘└─────┘└─────┘
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How many factor pairs can you think of for 24?

We can write factors like this:

1, 2, 4, 5, 10, 20

Or as factor pairs:
1 x 20, 2 x 10, 4 x 5

Highest common factor:

20: 1, 2, 4, 5, 10, 20

24: 1, 2, 3, 4, 6, 8, 12, 24

How many factor pairs can you think of for 36?

What is the highest common factor?

Partner discussion -

Use your knowledge of factors to answer this question.

There are 49 pears and 56 oranges.

They need to be put into baskets of pears and baskets of oranges with an equal number of fruit in each basket.

Amir says,

There will be 8 pieces of fruit in each basket.

Jack says,

There will be 7 pieces of fruit in each basket.

Who is correct? Explain how you know.

Tommy has two pieces of string.

One is 160 cm long and the other is 200 cm long.
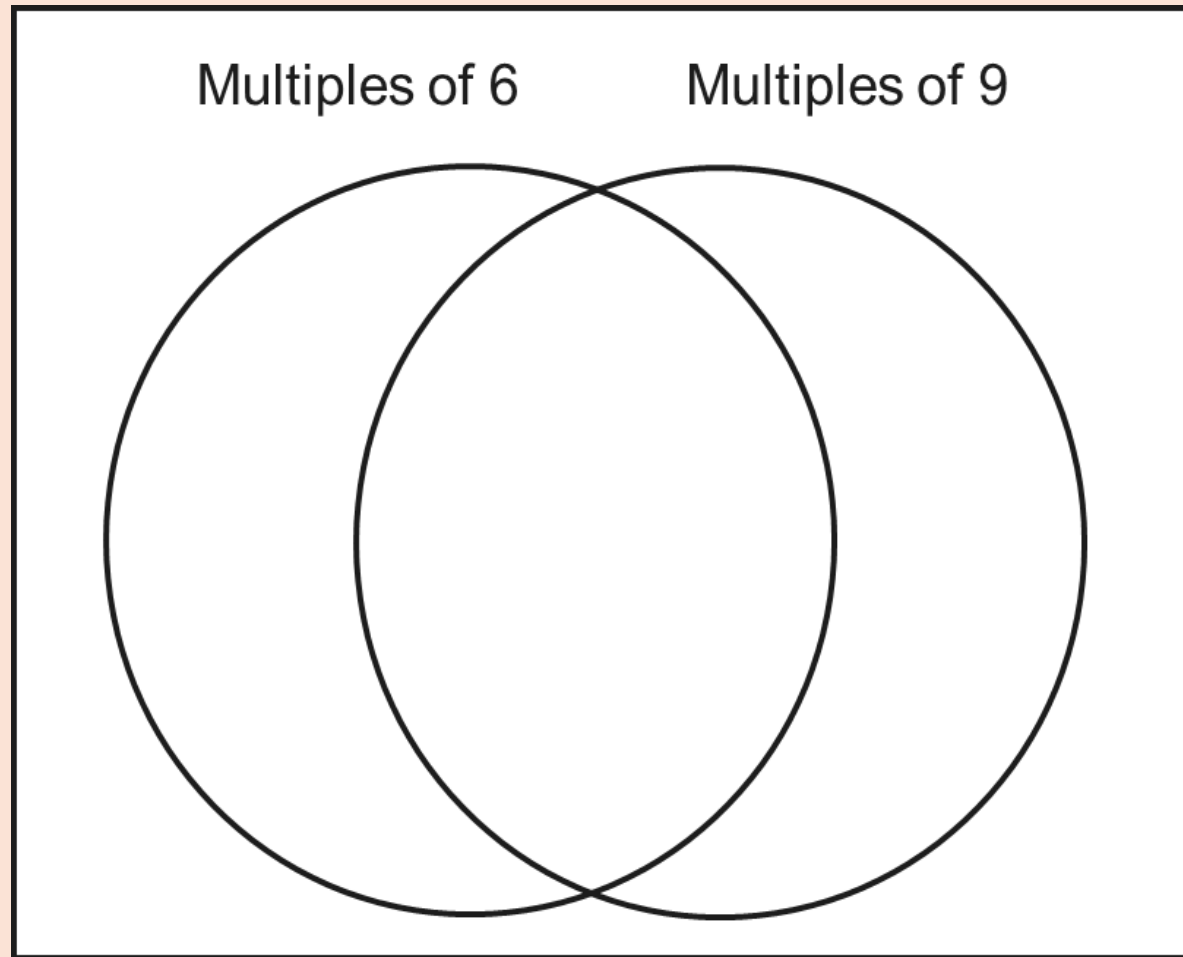
He cuts them into pieces of equal length.

What are the possible lengths the pieces of string could be?

TBAT: Identify common factors and common multiples

Draw the Venn diagram and write the numbers in the correct places.

6	9	18
36	45	48
54	72	84
108	122	126

Multiples of 6   Multiples of 9

What are the common multiples of 6 and 9?

Give the first three common multiples for each pair of numbers.
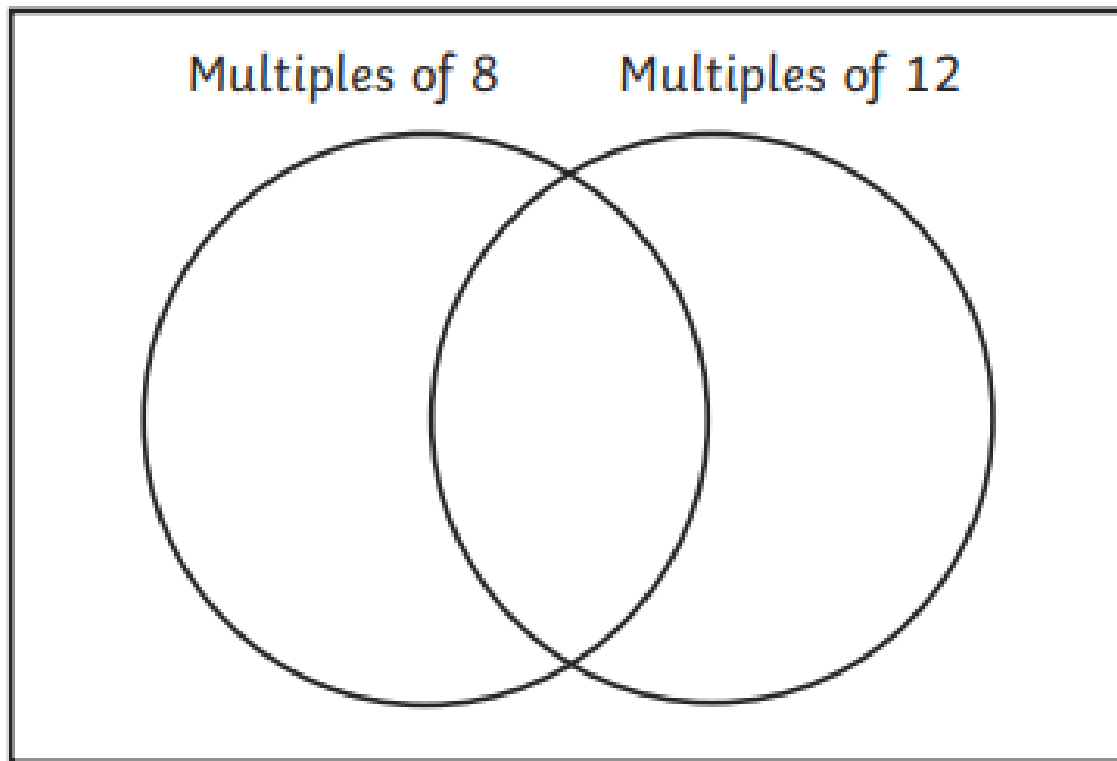
| 12 | 6 |

| 4 | 8 |

| 3 | 9 |

| 4 | 6 |
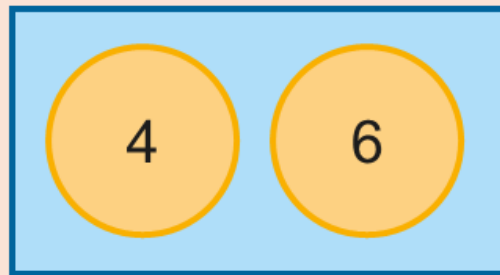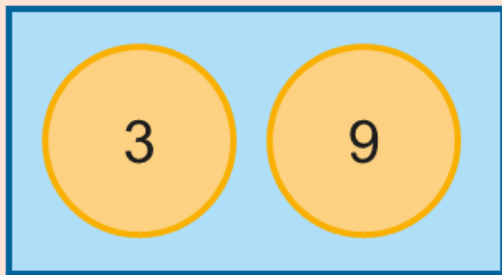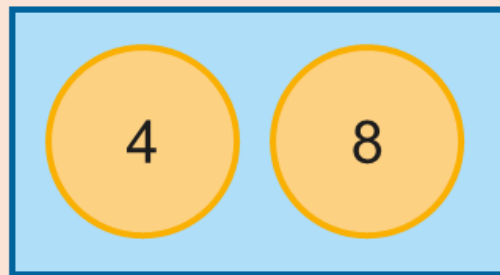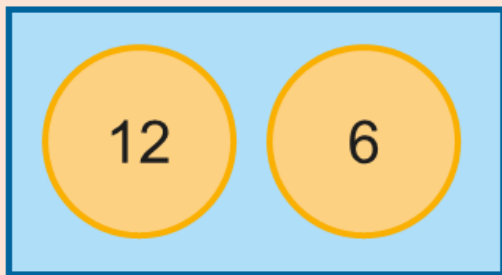
03.02.25
TBAT: Identify common factors and common multiples.

1. Sort the numbers into this Venn diagram.

| 7 | 12 | 16 | 24 | 32 |

| 36 | 48 | 72 | 54 | 120 |

Multiples of 8   Multiples of 12

2. Sort the numbers into the correct places on the Venn diagram.

| 1 | 2 | 3 | 4 |

| 6 | 8 | 12 | 16 |

| 19 | 24 | 48 | 57 |

Factors of 48   Factors of 57

03.02.25
TBAT: Identify common factors and common multiples.

Mastery Challenge

Challenge

Mastery with Greater Depth
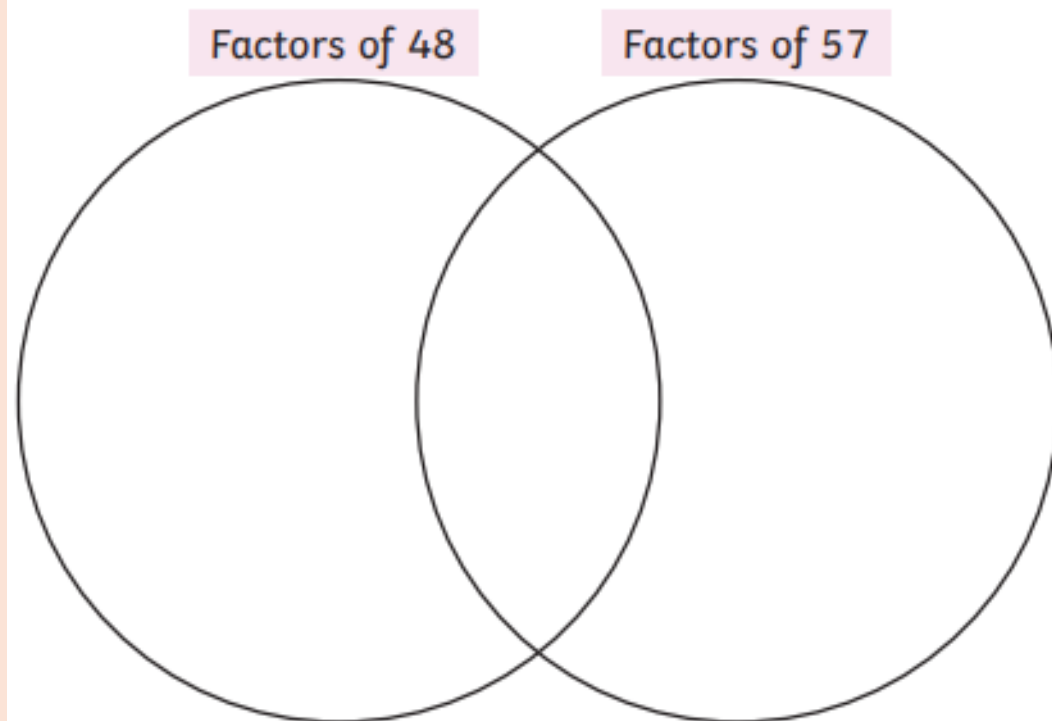
Is Elena's statement true or false? Prove it.

The first three common multiples of 6 and 9 are 18, 54 and 72.

Elena

Zeke and Abi are explaining how to find common multiples of 3 and 6.
Whose statement is correct? Explain your reasoning.

I multiplied 3 and 6 together to get 18 and then I added 18 over and over again.

Zeke

I listed the multiples of 3 and the multiples of 6 and found the numbers that are in both lists.

Abi

1) Felix has two pieces of ribbon. One is 180cm long and the other is 240cm long. He needs to cut both ribbons into equal-sized pieces, longer than 10cm, without any left over.

a) Find all possible lengths of ribbon he could cut where the lengths are whole centimetres.

b) Explain why he would not be able to cut the ribbons into lengths of 40cm.

Monday 3rd February
TBAT: retrieve information and explore vocabulary and word meaning.

3 in 3

There are moments in history when the future of a whole nation hangs in the balance. Just such a moment happened in 1940 when Britain stood alone against the might of Nazi Germany under its leader Adolf Hitler. Hitler never really wanted to invade Britain, but he also could not afford to leave it alone, so he ordered his air force, the Luftwaffe, to destroy the Royal Air Force (RAF). This would make it much easier for his armies to cross the English Channel and take over the whole country. He hadn't counted on the bravery and determination of the young fighter pilots from Britain and her allies to beat back the massed attacks by the German aircraft.

1. *...Britain stood alone against the might of Nazi Germany...*

What does the word 'might' mean in this context? Tick one.

strength   *leader*   *possibility*   *flight*

2. The text says that Hitler did not want to invade Britain, so why did he order his air force to attack?

3. Find and copy one word in the last sentence that means friends or partners.

Monday 3rd February
## TBAT: retrieve information and explore vocabulary and word meaning.

Words we will find in the text:

docks - an enclosed area of water in a port for the loading, unloading, and repair of ships.

wailing - crying with pain, grief, or anger.

gas mask - a protective mask used to cover a person's face as a defence against poison gas

fly-away hairs - unruly hairs that stand straight up instead of laying flat.
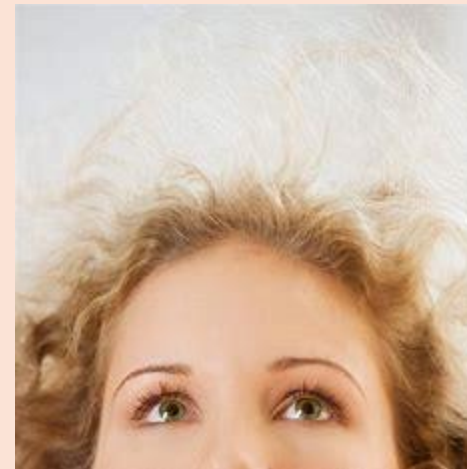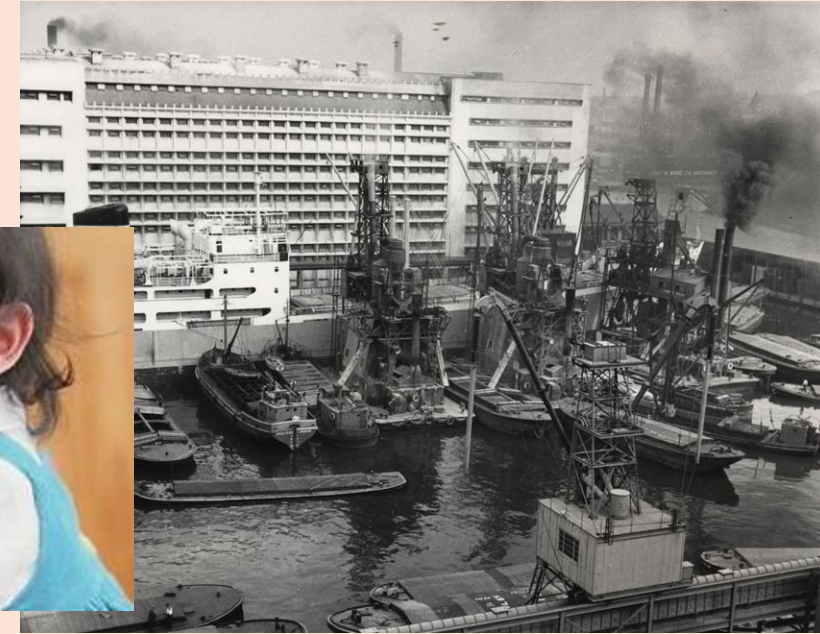
Retrieval

1. According to the text, which two items did the author and her friends each have with them when they arrived to board the train?

2. According to the text, the author's father is in the merchant navy. Give two examples of items which he helps to transport.

3. What was the author thankful for at the end of the diary entry?

Inference

1. The author describes Mrs Wilson as kind. What other impressions do you get of Mrs Wilson.

2. Look at the paragraph beginning, 'At the time we would usually leave for school'. Give one piece of evidence which suggests the child hasn't yet experienced an air raid.

3. What was the author thinking when they first heard about children being evacuated from Cardiff?

I'd love to have an adventure to the countryside.

I don't want to leave Mother. I know we might be bombed here by the docks but I can't be separated from her.

I hope I don't have to go to the same home as June.

I am so excited to finally go on a train.

1. '…as there's always a lot of gossip and hearsay going around, I wasn't sure whether to believe it.'

What does the word 'hearsay' mean in this sentence?

- [ ] lies
- [ ] truths
- [ ] rumours
- [ ] news

2. Look at the paragraph beginning, 'Although I quite enjoyed the train ride'.

'I was suddenly conscious about how I looked'.

This means that…

- [ ] she quickly became aware of her appearance
- [ ] she had tried to look her best
- [ ] she knew appearances weren't important
- [ ] she felt upset about how she looked

3. **'I suppose living so close to the docks, it was bound to happen to me sooner or later.'**

Which of the following words is closest in meaning to **'bound'** as it is used here?

☐ tied up

☐ wrapped with rope

☐ unlikely

☐ inevitable

4. Look at the second paragraph.

'I argued with Mother at first but she insisted...'

What does **'insisted'** mean in this sentence?

☐ listened carefully

☐ changed her mind

☐ had made a firm decision

☐ shouted

. Look at the second paragraph.

'But what about her?'

The question suggests that the author...

☐ wants to know if there is room on the train for her mother

☐ is worried about Susie

☐ wants to know if she will be evacuated with her sister, June

☐ is worried about her mother's safety

6. Look at the paragraph beginning 'Over the last few weeks, the docks have been targeted numerous times.'
Find and copy one word from this paragraph that is closest in meaning to 'deliberately attacked.'

Challenge

Number these facts from 1-5 in the order in which they happen.

She discovered that Mrs Wilson doesn't know how to plait hair.
She has dinner with Mr and Mrs Wilson.
She journeyed into the countryside.
She was chosen by Mr and Mrs Wilson.
The author met her friends at the railway station.

Monday 3rd February
**TBAT: design a project that builds on a given example.**

- I can choose the artwork for my project

- I can create algorithms for my project

- I can explain my design choices

Explore this game:
ncce.io/introfruit

1. How do you play the game?
2. How many sprites are there?
3. What do the sprites do?
4. Do the sprites all fall at the same speed?
5. How do you know how well you have done?

Think, pair, share
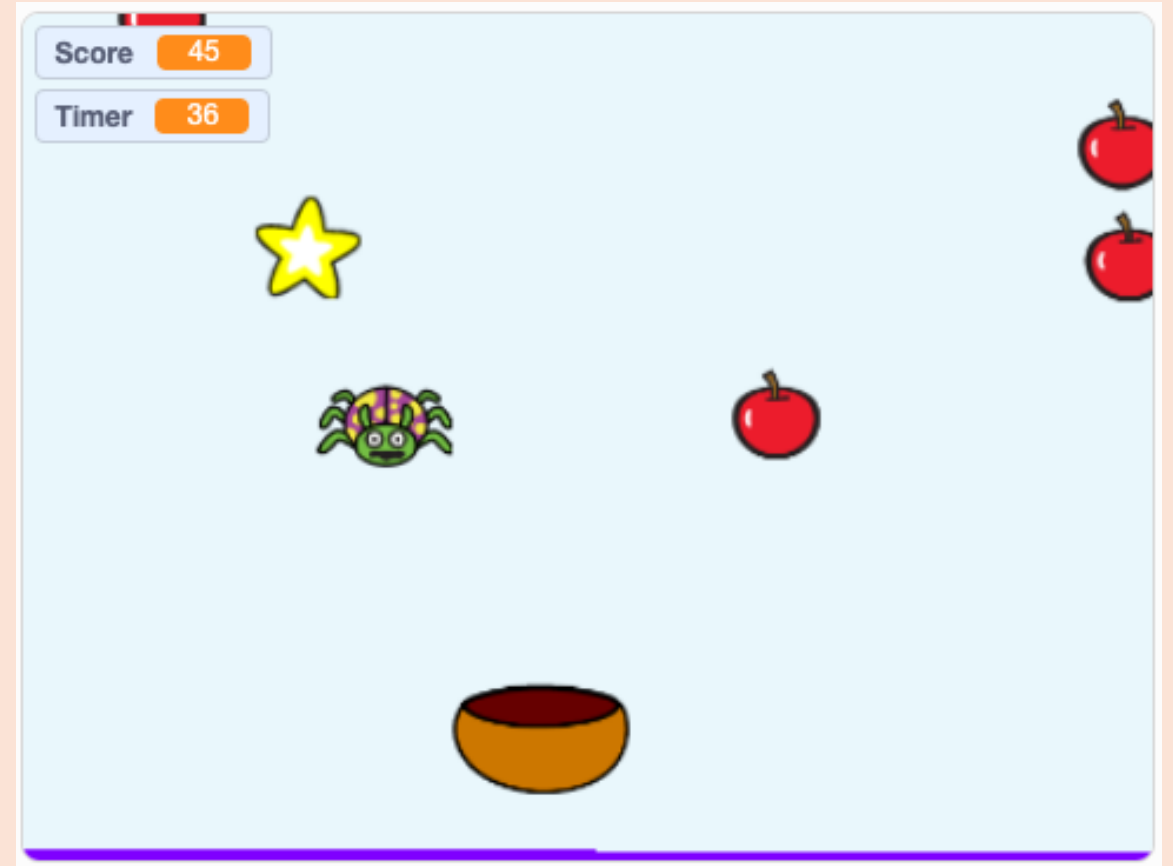
Thinking like a games designer

Games designers work in a team and come up with ideas, decide rules and work on the look and playability of a game. Many new games fit existing genres – action, shooter, role playing or adventure.

Games designers combine their own ideas with elements from games that enjoy or are already popular or familiar. They might suggest the setting, characters, and graphics and balance the rules for scoring or losing lives to make it more fun or challenging.

1

Over the next few lessons, you will become a **games designer** and create a project for your new game.

Task: Create a 'catching' game that includes a score and at least three falling objects. The objects should fall at different speeds.

Game template

In this version, the apples and the spider have been removed.

ncce.io/fruitcatcher

This will be the basis for your game.

Choose your artwork

Planning is an important stage of **game design**:
● Choose two more sprites to fall
● Choose one background

Only complete the first section of the worksheet. You will complete the rest of the worksheet in the next activity.

| Sprite 1	Sprite 2	Sprite 3:
Name: Falling star	**Name:**	**Name:**
Background:		

Design your algorithms

An algorithm is a precise sequence of instructions, or set of rules, for performing a task.

Algorithm for the falling star

The falling star moves down by eight from a random x position at the top of the screen.

If the sprite falls onto the bowl, change the score by three. It falls again from a random x position at the top of the screen.

If the falling star touches the screen bottom, it falls again from a random x position at the top of the screen.

Falling star

+3 points

Bowl
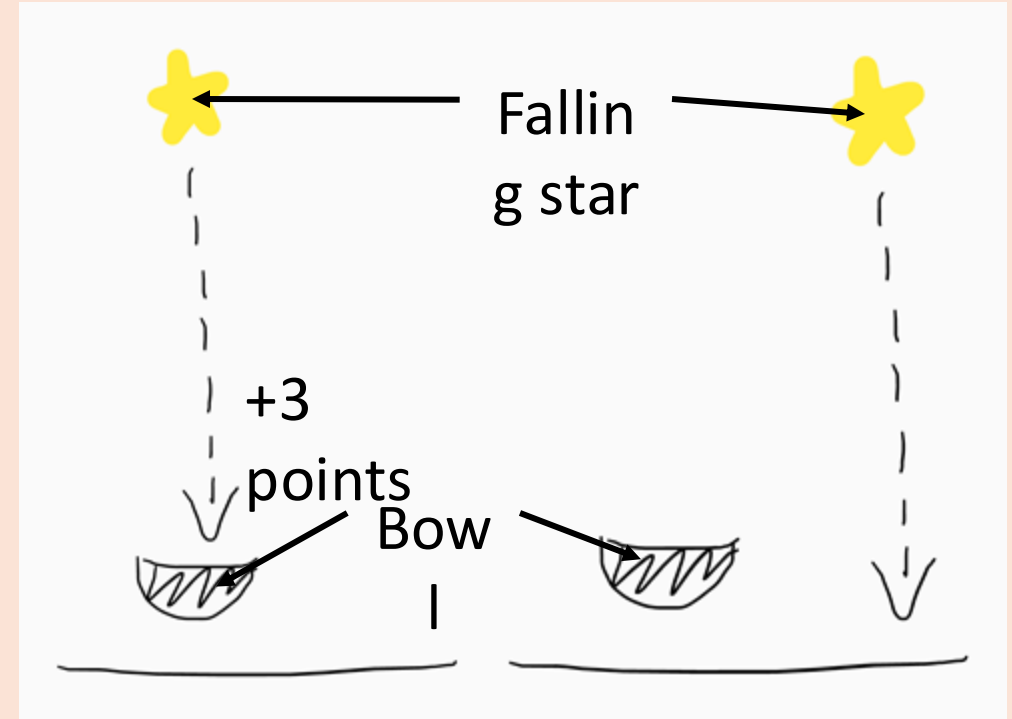
Design your algorithms

Add algorithms for the two new sprites to the design template. Each algorithm should include a **drawing** and a **description**.

Game design suggestions:

● Each sprite should change the score by a different amount (you could use a negative number)
● Each sprite can move at a different speed
● Sprites can be different sizes

Make sure that any design choices are included in your algorithms.