



# Maths

## Addition and Subtraction

# Need a coherently planned sequence of lessons to complement this resource?

**Lesson Breakdown**

Below is our suggestion for the most coherent and progressive sequence to teach this area of Planit Maths steps on the White Rose Maths scheme of learning although we have not aimed to mirror the exact order in which they are presented.

**Recall and Use Facts (1): Number Facts up to 10**

This computer game based lesson is designed to help children secure their understanding of number facts. Children use a range of methods to investigate and check if they are correct. Differentiated activity sheets and mastery cards to help children.

**NC Statement:** Recall and use facts to 20 fluently and derive and use related facts up to 100.

**Lesson Aim:** To recall and use number facts up to 10.

**Recall and Use Facts (2): Number Facts up to 20**

This lesson teaches children to use familiar number facts to solve and create problems. Children are encouraged to use different representations to support their learning. Differentiated activity sheets and mastery cards to help children develop fluency.

**NC Statement:** Recall and use facts to 20 fluently and derive and use related facts up to 100.

**Lesson Aim:** To recall and use number facts up to 20.

**Solve Problems (1): Using Different Representations to Solve Problems**

Children learn to solve addition and subtraction problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods. This lesson includes Diving into Mastery activity cards with fluency resources.

**NC Statement:** Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods.

**Lesson Aim:** To solve addition and subtraction problems using objects, pictures and models.

**Introduction**

In this unit, children will learn to recall and use addition and subtraction facts. They use a variety of different models, images and equipment to build their number sense, enabling them to use facts flexibly. They learn different strategies to help them add and subtract numbers efficiently, explaining their methods with concrete resources or jottings. Methods include: adding a unit to a ten, adding three single-digit numbers and adding and subtracting multiples of ten leading to pairs of two-digit numbers. They find the difference between numbers and reason about when it is quicker to find the difference or take away. They build up their understanding of commutativity and inverse relationships, using these to solve increasingly complex missing number problems. They apply their learning to problem-solving, and are able to ask questions, explain their choices and demonstrate their methods.

**Resources**

In addition to your standard maths resources, you will need:

- digital cameras

**Assessment Statements**

By the end of this unit;

children working towards the expected level will be able to:

- recall and use at least four out of six number facts to ten and derive their associated subtraction facts;
- add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required;
- explain their addition and subtraction methods verbally, in pictures or using apparatus;
- understand that two numbers can be added in any order and the answer will be the same.

children working at the expected level will be able to:

- recall number facts to add and within ten and subtraction facts. Use these to derive number and within 20 and 100;
- add and subtract within 100: a two-digit number and ones, a two-digit number and tens, two two-digit numbers;
- add three one digit numbers using efficient methods;
- understand that addition is commutative but subtraction is not, and explain what this means;
- use the inverse relationship between addition and subtraction to solve problems and check their calculations;
- solve addition and subtraction problems in context of quantities and measures, using pictures and mentally.

**Addition and Subtraction**

Maths | Year 2 | Steps to Progression Overview

The aim of this overview is to support teachers using Planit Maths to show the most coherent and progressive sequence to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within Planit Maths. Whenever possible, lesson packs have been marked to teach the small steps on the White Rose Maths scheme of learning.

**Yearly Overview**

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value	Number: Addition and Subtraction						Measurement: Money	Number: Multiplication and Division			
Spring	Number: Multiplication and Division	Statistics	Geometry: Properties of Shape			Number: Fractions	Measurement: Length and Height	Consolidation				
Summer	Position and Direction	Problem Solving and Efficient Methods	Measurement: Time	Measurement: Mass, Capacity and Temperature	Investigations							

See our [Addition and Subtraction Steps to Progression](#) document.

Twinkl Planit is our award-winning scheme of work with over 4000 resources.



# Using Number Facts to Solve 2-Step Problems



# Aim

- To solve two-step problems involving addition and subtraction.

# Success Criteria

- I can solve problems by adding.
- I can solve problems by subtracting.
- I can use objects, pictures and models to help me solve problems.
- I can solve two-step problems by adding and subtracting.



# Remember It



Choose 2 numbers on the grid that you could add or subtract from each other to make the target number. If it is correct, colour them in your team colour.



The first team to connect 4 numbers in a row, column or diagonally wins the game.



# Remember It



Your target  
is 20.



1	20	5	6	2
10	16	50	10	20
15	18	0	12	13
17	7	14	40	30
19	4	3	60	70

$18 + 2 = 20$  so  
I can colour  
them in.



Click once in  
a square to  
turn it green,  
twice for  
yellow and a  
third time  
to cancel.



**Your target  
is 20.**

# Remember It



$3 + 17 = 20$  so I can  
colour them in.

20	18	5	12	19	80
10	16	23	50	37	24
70	44	0	99	13	42
17	7	14	49	29	22
100	4	3	64	79	26
6	32	1	15	20	2

Click once in  
a square to  
turn it green,  
twice for  
yellow and a  
third time  
to cancel.

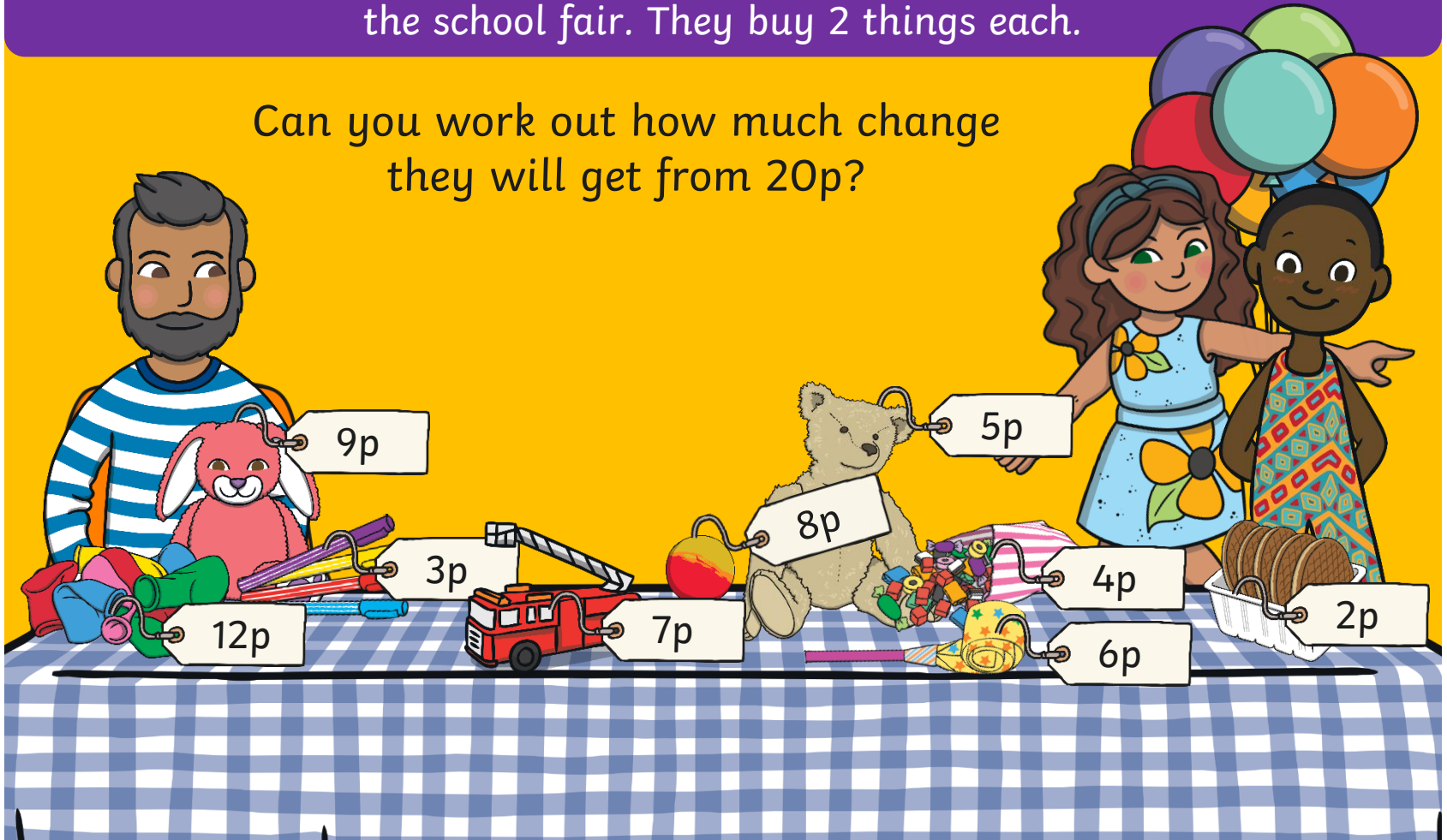


# Buying Treats



Halema and Erin are buying some treats from the stall at the school fair. They buy 2 things each.

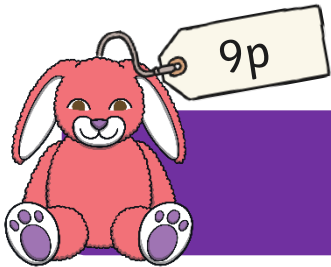
Can you work out how much change they will get from 20p?







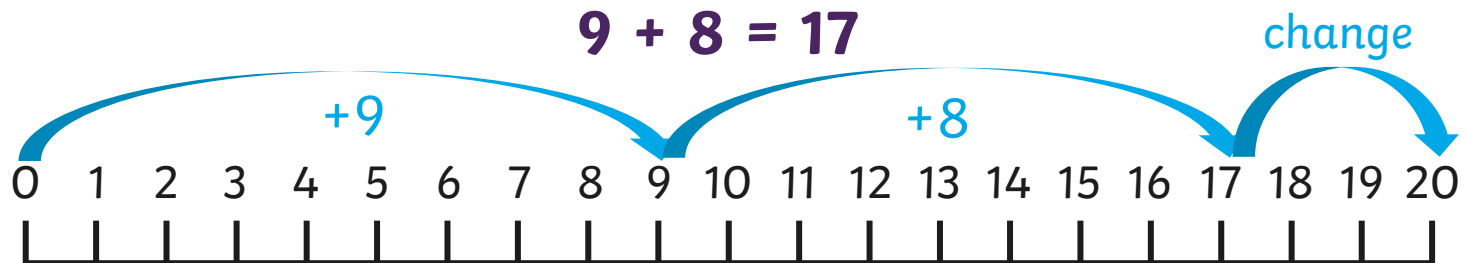
# Buying Treats



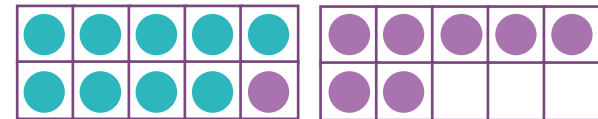
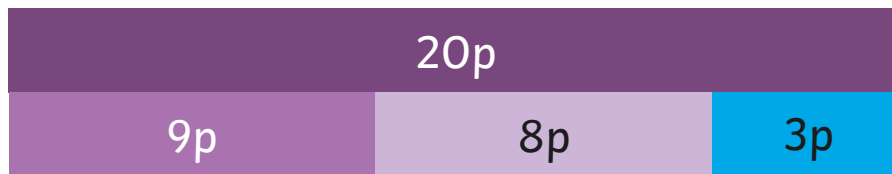
Haleema bought the puppet and the bouncy ball.  
How much change did she get?



Next, we need to work out how much change she would get.



We could count up from 17 – 20 or we could subtract 17 from 20.  
Which do you think is easier?



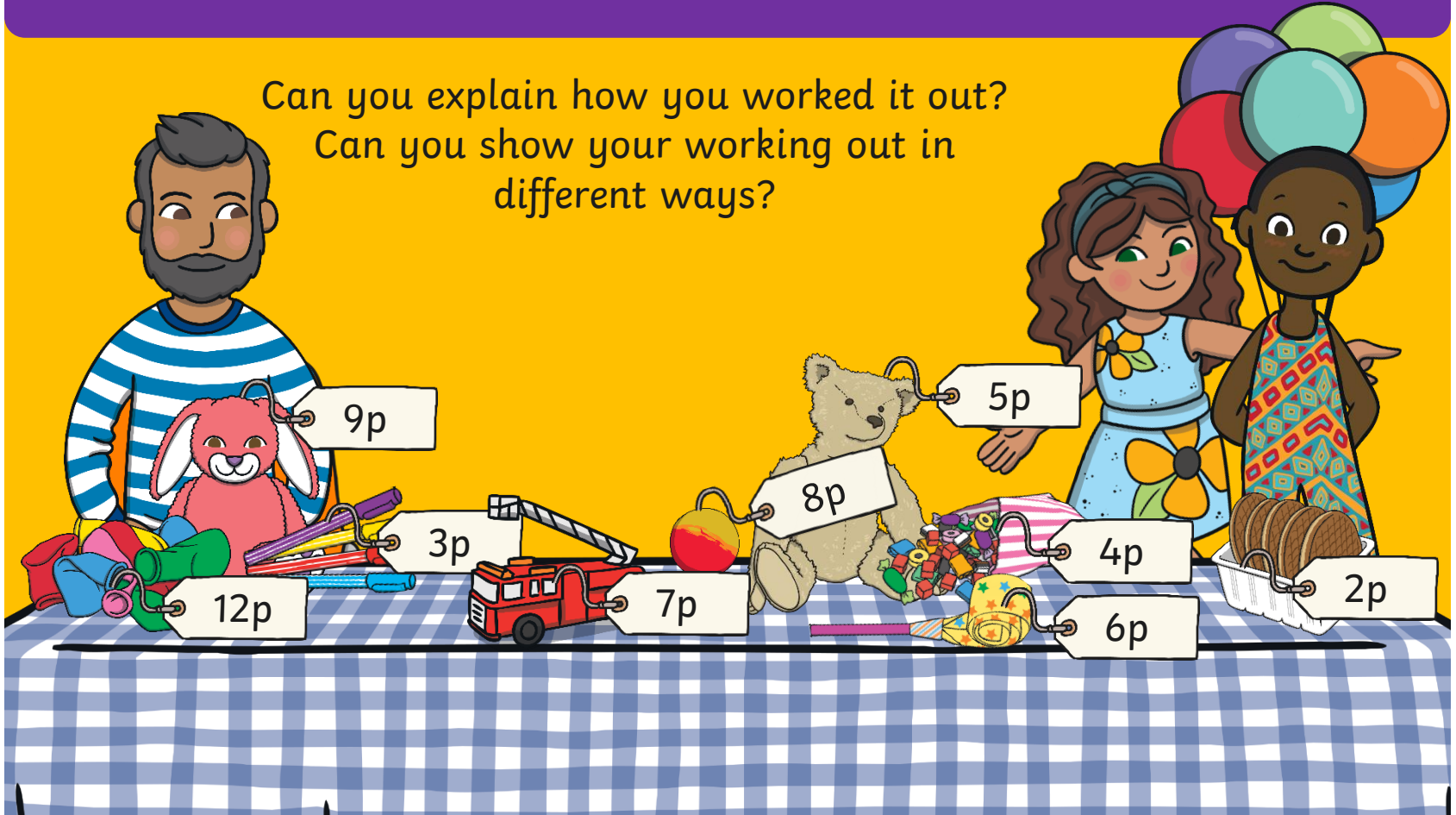
She would get 3p change.

# Buying Treats

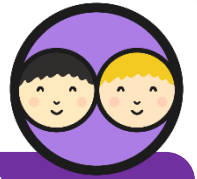


Choose 2 things from the stall and find change from 20p.

Can you explain how you worked it out?  
Can you show your working out in  
different ways?



# Choosing Rides



Halema and Erin are allowed 20 minutes to choose which rides they'd like to go on. They can afford to go on 2 rides. What could they go on and how much time will they have to spare?

★

**Pirate Ship**

12 minutes



★

**Carousel**

7 minutes



★

**Tea Cups**

4 minutes



★

**Rollercoaster**

9 minutes



★

**Helter-Skelter**

5 minutes



★

**Ghost Train**

6 minutes



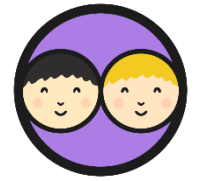
★

**Log Flume**

10 minutes

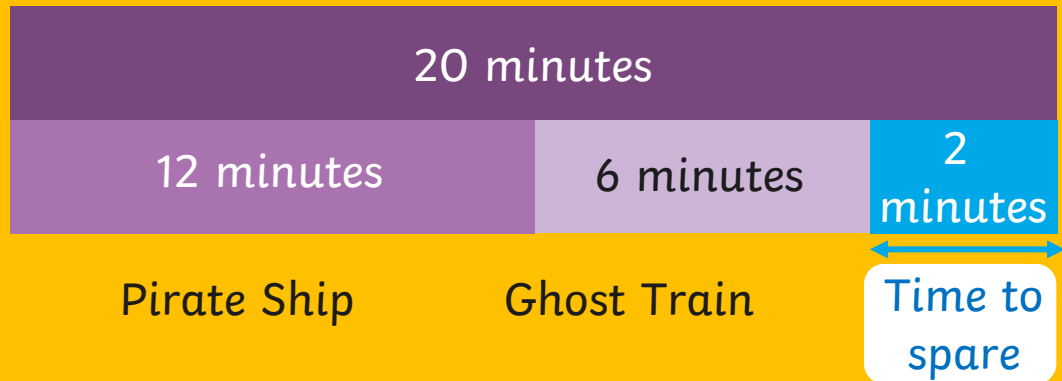


# Choosing Rides



Halema and Erin choose the Ghost Train and the Pirate Ship.

The Ghost Train takes 6 minutes. The Pirate Ship takes 12 minutes.



What does the blue box represent?

$$12 + 6 = 18$$

It would take 18 minutes to go on the  
Pirate Ship and Ghost Train.

$20 - 18 = 2$ . They have 2 minutes to spare.

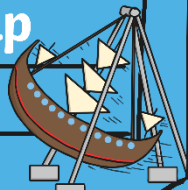
# Choosing Rides



What other 2 rides could they go on and how long would they have to spare?

Pirate Ship

12 minutes



Carousel

7 minutes



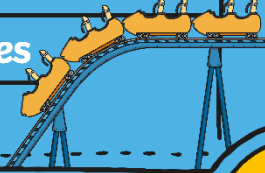
Tea Cups

4 minutes



Rollercoaster

9 minutes



Helter-Skelter

5 minutes



Ghost Train

6 minutes



Log Flume

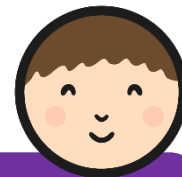
10 minutes



**Choose 2 rides  
and calculate the  
time to spare.  
Use a bar model  
to help you.**

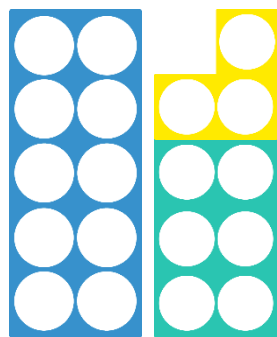
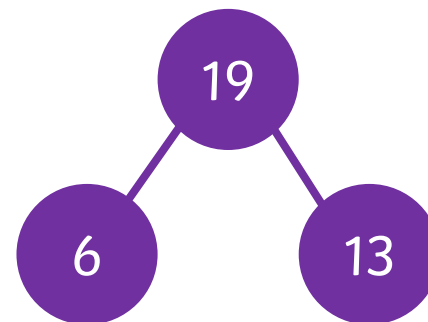
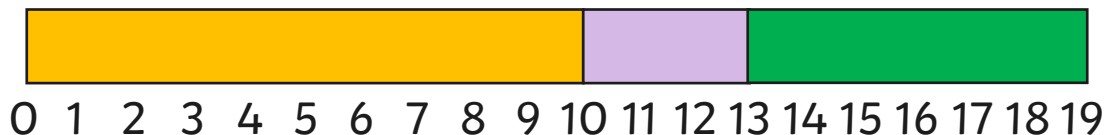


# A Day at the Fair

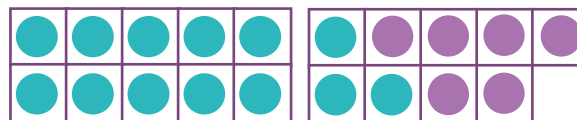


Work with a partner to solve the problems on your activity sheet.  
Represent your work in as many ways as you can.

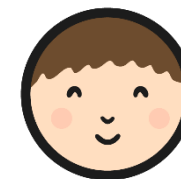
Here are some examples:



Click the models to  
hide them. Click [here](#) to  
show them all.



# A Day at the Fair



## A Day at the Fair

To solve two-step problems involving addition and subtraction.

### Buying Ice Creams

Haleema and Erin have 10p to spend on ice cream toppings.

They buy 2 toppings. Choose 2 toppings that they could buy. How much change would they have from 10p?

Find the answers by using ten 1p coins, a part-whole model or a ten-frame and ten counters.



**Strawberries**  
1p

**Bananas**  
3p

$4p + 2p = 6p$   
 $10p - 6p = 4p$   
I would get 4p change from 10p.

**Marshmallows**  
6p

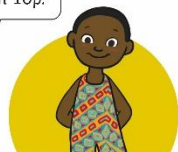
**Sprinkles**  
2p

**Flake**  
5p

**Chocolate Chunks**  
7p

**Fudge Chunks**  
4p

**Blueberries**  
8p

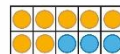


## A Day at the Fair



Which 2 ducks in the hook-a-duck game. Which 2 ducks might she need to win?

How many more points would she need to win?

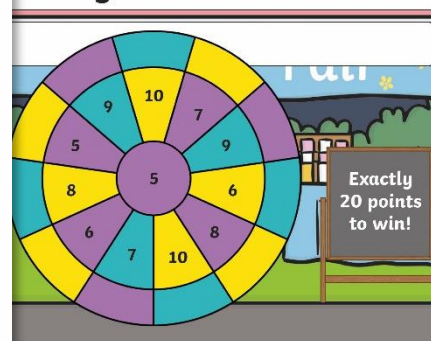


Write your answer here:

Which 2 different ducks. How many points might she need to win?

Write your answer here:

## A Day at the Fair



Which 2 darts scored 8 points. Her 2<sup>nd</sup> dart scored 7 points. How many more points does she need to win?

Which 2 darts scored more points than Haleema. Which 2 darts could she use to win?

Explain your reasoning.

Write your answer here:







## Diving into Mastery

Dive in by completing your own activity!



### Using Number Facts to Solve 2-Step Problems

Greg spent 16p on treats. Tick the treats that he got.

					
8p	9p	4p	12p	11p	Greg
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Greg paid with a 20p coin.

How much change did he get?

I had 20p, but I lost 5p.  
Can I still buy 2 treats?

How much does Sam have to spend?

What can she buy?

What would you choose if you had 20p to spend?

How much change would you get?



# Ask a Question



Can you ask a 2-step question?

How much longer does it take to ride the Pirate Ship and the Log Flume than the Ghost Train and the Rollercoaster?

**Helter-Skelter**



5 minutes

**Log Flume**



10 minutes

**Ghost Train**



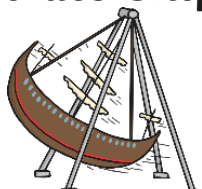
6 minutes

**Carousel**



7 minutes

**Pirate Ship**



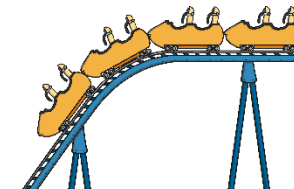
12 minutes

**Tea Cups**



4 minutes

**Rollercoaster**



9 minutes

It takes 22 minutes to ride the Pirate Ship and the Log Flume.  
It takes 15 minutes to ride the Ghost Train and the Rollercoaster.  
It takes 7 minutes longer to ride the Pirate Ship and Log Flume.



# Aim



- To solve two-step problems involving addition and subtraction.

# Success Criteria

- I can solve problems by adding.
- I can solve problems by subtracting.
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