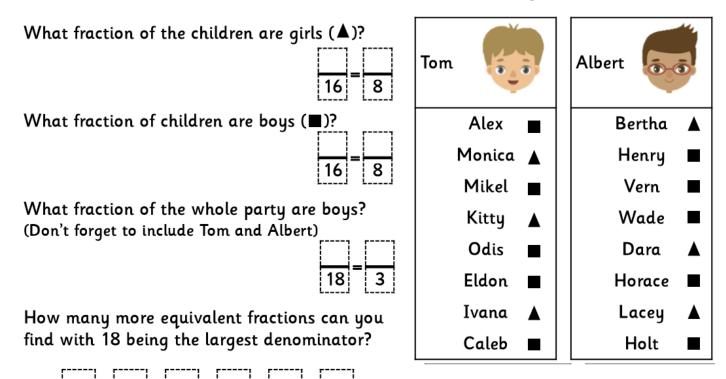
Reasoning and Problem Solving - Fractions



It's Tom and Albert's birthday and you are going to help them have a joint party. How exciting! There are lots of things to organise, so there's no time to waste!

1. Both children have made a list of the children who are coming.



The boys would like to make sure everyone has a party hat.

2. $\frac{2}{9}$ of all the party hats are purple and $\frac{1}{9}$ of all the party hats have stripes.

 $\frac{3}{9}$ of the party hats have a pom-pom top and the rest are covered in red circles.

How many of each of the hats do they boys have?











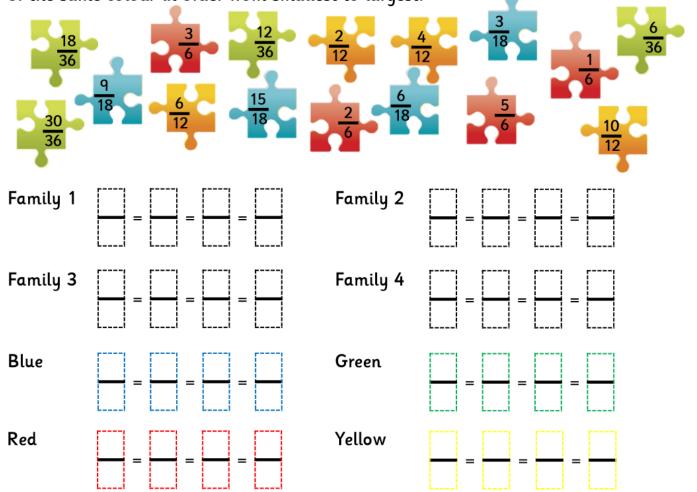






Now for the party games — Pass the Parcel. The children find a jigsaw piece in each layer of the parcel.

3. Help the children put the pieces into (a) families of equivalent pieces then (b) pieces of the same colour in order from smallest to largest.



After playing games, all the children are thirsty and ready for a drink. They have bottles of orange, apple and cherry juice. Bottles of orange and apple juice contain 8 cups of juice and cherry juice contains 6 cups.

4. How many bottles of juice will they need if they drink the amount of cups in the table below?

	Cups	Full Bottles
Cherry Juice	9	
Orange Juice	21	
Apple juice	15	



Time to eat, but remember, savoury before sweet — even when it is your birthday! The children dive into the selection of pizzas on the table. Each pizza is cut into eight slices.

5. Below is how m	uch of each pizza is eate	n by each child at the party:	
Alex – 2 pepperoni, 2 margarita		Monica – 2 margarita, 3 chicken	
Mikel – 3 hawaiian, 1 margarita		Wade – 4 hawaiian	
Kitty – 5 margarita		Odis – 3 chicken, 2 hawaiian	
Eldon – 1 pe	operoni, 2 chicken	Ivana – 4 margarita	
Albert – 2 ma	rgarita, 1 hawaiian	Caleb – 2 pepperoni, 2 margarita	
Vern – 4	i pepperoni	Henry – 5 pepperoni	
Bertha – 2 chi	cken, 2 margarita	Dara – 2 margarita, 2 chicken	
Horace — 2 pepp	peroni, 3 margarita	Holt – 6 margarita	
Tom – 4 hawa	iian, 1 margarita	Lacey — 2 pepperoni, 3 hawaiian	
Work out how muc	h pizza has been eaten.		
Pepperoni:			
Margarita:			
Chicken:			
Hawaiian:			
How much pizza is	eaten in total?		

Once the pizza is finished, the children are given a selection of buns. There are:

15 strawberry buns



20 chocolate buns



12 vanilla buns



10 blueberry buns



The children all dive in to the buns and they soon begin to disappear!!

 $\frac{2}{3}$ of the strawberry buns, $\frac{1}{2}$ of the chocolate buns, $\frac{3}{5}$ of the blueberry buns and

 $\frac{3}{4}$ of the vanilla buns are eaten.

6. How many of each type of bun are eaten and how many are there left?

Bun Type	Number eaten	Number left
Strawberry		
Chocolate		
Vanilla		
Blueberry		
Total amount of buns left		

You have had so much fun and the party is nearly over. There's just time for a few more party games before the children will be on their way home with a party bag containing a toy and a balloon.

All the children will get a party bag including Tom and Albert.

There are the same number of each toy, which are shared between the bags.

 $\frac{4}{6}$ of bags contain blue balloons $\frac{4}{12}$ of bags contain red balloons and the remaining

bags have green ones.



7. How many of each of the toys and balloons would be needed to fill the bags?

Toy	Amount
Jigsaw	
Yo-yo	
Paint	

Balloon	Amount
Blue	
Red	
Green	

Well done! Tom and Albert have had a fantastic birthday.

The party is over but the excitement is not over yet...

