

Calculating Fractions and Decimals

Maths

Year 6

Lesson 5 of 5

Learning Objective		Resources
To be able to divide proper fractions by whole numbers.		Slides Game Board 5A/5B/5C Game Cards 5A/5B/5C Help Sheet Calculation Cards (FSD? activity only) Target Cards (FSD? activity only)
Teaching Input		
<ul style="list-style-type: none"> Show children the array diagram. What calculation is this representing? How do you know? Children to think, pair, share their responses then go through the explanation on the slides. Recap multiplying fractions. Now show the statement $\frac{1}{2} \div 4 =$ on the slides. How do you think you could solve this problem? Children to think, pair, share their ideas. Go through the explanation on the slides for how to solve calculations like this, using diagrams to support (e.g. half a pizza shared between four people is $\frac{1}{8}$ each). Show children the calculation $\frac{1}{3} \div 6$ on the slides. Challenge children to use diagrams and a context (e.g. one third of a cake divided by six people) to help them work out the answer. They should then express it as a calculation. Children to share their working out. Repeat this with the other calculations. Go through the word problems on the slides, e.g. Three friends are out for dinner. When the bill comes, two thirds of the bill has already been paid by the restaurant because of the bad food. What proportion of the bill needs to be paid by each person? Children to work out the proportion, then give them the total cost of the bill. Can you work out what each person needed to pay? Give children some time to find the answer, then check on the slides. Tell children that today they will need to add, subtract, multiply and divide fractions. Show an example of each type of calculation on the slides. How would you solve each of these? Give children some time to discuss their responses and make sure children understand the method for each one. 		
Main Activity		
<p><u>Lower ability:</u></p> <p>Provide children with Game Board 5A and Game Cards 5A. Children to follow the instructions on the board to play the game. They will need to add, subtract, multiply and divide fractions to find the answers on their game board. You may wish to provide children with the Help Sheet to support them.</p>	<p><u>Middle ability:</u></p> <p>Provide children with Game Board 5B and Game Cards 5B. Children to follow the instructions on the board to play the game. They will need to add, subtract, multiply and divide fractions to find the answers on their game board.</p>	<p><u>Higher ability:</u></p> <p>Provide children with Game Board 5C and Game Cards 5C. Children to follow the instructions on the board to play the game. They will need to add, subtract, multiply and divide fractions to find the answers on their game board. The answers on the board are in their simplest form so children will need to convert their answers in some instances.</p>
Fancy something different...?		
<ul style="list-style-type: none"> Provide children with one of the Calculation Cards which contain fractions, decimals, whole numbers and operation symbols, as well as a set of the Target Cards. Children are challenged to follow the instructions on the Target Card to find a given answer. They will need to use their understanding of fractions, factors and multiples to help them, as well as trial and improvement methods. 		
Plenary	Assessment Questions	
<p>Go through the multiple choice questions on the slides to assess children's understanding of the concepts they have looked at over the last few lessons.</p>	<ul style="list-style-type: none"> Do children understand what is happening to a fraction when it is divided by a whole number? Can children divide proper fractions by whole numbers using an algorithm? Can children solve problems in context? 	