



Makes Maths Fun

Level 4

FRACTIONS & DECIMALS

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

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Fractions & Decimals

Level 4 is designed for students in their fourth year at school often called Year 3. Students will model, compare and represent commonly used fractions and decimals, add and subtract decimals to two decimal places and interpret everyday percentages.

Knowledge: Students will compare fractions and decimals to solve a riddle.



Students who demonstrate proficiency in this activity move on to Comprehension.



Students stop here as they require additional teacher support to master this activity.

Comprehension: Students will use a die to create fraction problems for them to solve.



Students who demonstrate proficiency in this activity move on to Application.



Students stop here if time has run out or they require additional support with this activity.

Application: Students will solve a complex fraction and decimal puzzle.



Students who demonstrate proficiency in this activity move on to Analysis.



Students stop here if time has run out or they require additional support with this activity.

Analysis: Students will create decimals and order these as highest and lowest.



Students who demonstrate proficiency in this activity move on to Synthesis.



Students stop here if time has run out or they require additional support with this activity.

Synthesis: Students will add decimals up to 2 decimal places.

Evaluation: Suggested questions provide a starting point for discussions related to fractions and decimals.



Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.



All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

Name: _____

Knowledge

Students will compare fractions and decimals to solve a riddle.

(A line drawn from the decimal to the fraction must pass through the correct letter to solve the puzzle)

Why does nobody talk to fractions?

1	0.5	.				.	9/10
2	0.2	.					1/3
3	0.1	.	T				1/4
4	0.3	.		E		P	16/100
5	0.45	.			H		1/10
6	0.6	.				O	82/100
7	0.7	.		R			1/2
8	0.82	.	N				59/100
9	0.9	.			N		45/100
10	0.33	.				S	1/5
11	0.25	.	I				67/100
12	0.59	.				T	7/10
13	0.16	.					3/10
14	0.67	.					6/10

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Fractions & Decimals - Level 4 - Students will model, compare, add and subtract decimals and percentages.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation



Let's Try This Again



Progress To Comprehension

Name: _____

Comprehension

Play the fraction game below.

You Will Need:

1 die per pair

How To Play:

1. Each player starts with 100 points.
2. Roll the dice to give you the %.
3. Choose to add, subtract, multiply or divide by this number.
4. Repeat this for 5 die rolls.
5. The closest player to 100 without going over 100 wins.

Example Game	Start	Roll 1	Operation	New Number
Roll 1	100	2 = 20%	+	120
Roll 2	120	5 = 50%	x	60
Roll 3	60	6 = 60%	+	96
Roll 4	96	3 = 30%	+	124.8
Roll 5	124.8	6 = 60%	x	74.88

Player: _____	Start	Roll 1	Operation	New Number
Roll 1				
Roll 2				
Roll 3				
Roll 4				
Roll 5				

Player: _____	Start	Roll 1	Operation	New Number
Roll 1				
Roll 2				
Roll 3				
Roll 4				
Roll 5				



Let's Try This Again



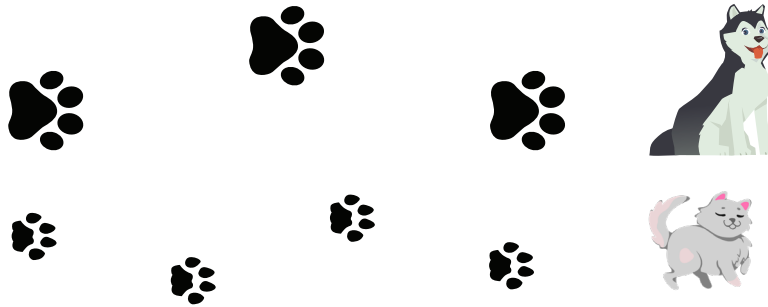
Progress To Application

Name: _____

Application

See if you can solve the puzzle below.

Once there was a dog who took 3 steps to walk the same distance that a cat could cover in 4 steps.



If the dog walked 30 steps how many steps did the cat take?



If the cat walked 24 steps how many steps did the dog take?



If the dogs walked 27cms how many steps would the cat take to cover the same distance?

If the cat walked 80cm how many steps would the dog take to cover the same distance?



Let's Try This Again



Progress To Analysis



Name: _____

Analysis

Play "Higher or Lower" below.

You Will Need:

- 4 dice per pair.
- 1 coin per pair.

How To Play:

1. Flip the coin to see if the winner is the higher scorer (heads) or the lower scorer (tails).
2. Take it in turns to roll the 4 dice to create a number. The die can be recorded in any order.
3. The player with the higher or lower number as dictated by the coin wins.
4. Take it in turns to toss the coin and go first.

Coin Toss	Player 1	Player 2	Winner
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	
Higher/Lower	____.____	____.____	



Let's Try This Again



Progress To Synthesis



Name: _____

Synthesis

Play the game below.

You Will Need:

- 4 dice per pair.

How To Play:

1. Take it in turns to roll the 4 dice to create a number.
2. Record the number on your score sheet.
3. Add your total after each roll.
4. The player with the highest total after 5 rolls wins.

Game 1

Rolls	Player 1	Player 2
Roll 1	____.____	____.____
Roll 2	____.____	____.____
New Total	____.____	____.____
Roll 3	____.____	____.____
New Total	____.____	____.____
Roll 4	____.____	____.____
New Total	____.____	____.____
Roll 5	____.____	____.____
Final Score	____.____	____.____

Game 2

Rolls	Player 1	Player 2
Roll 1	____.____	____.____
Roll 2	____.____	____.____
New Total	____.____	____.____
Roll 3	____.____	____.____
New Total	____.____	____.____
Roll 4	____.____	____.____
New Total	____.____	____.____
Roll 5	____.____	____.____
Final Score	____.____	____.____



Let's Try This Again



Progress To Evaluation

Evaluation

The following questions and activities are provide as a starting point for fun discussions related to Fractions and Decimals. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the Fractions and Decimals activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context. Suggested questions provide a starting point for discussions related to Fractions and Decimals.



Make a fraction, decimals and percentages equivalent table. Is it easier to covert from fractions to percentages or percentages to decimals.



Can you convert from fractions such as $\frac{1}{2}$ or $\frac{1}{3}$ to a percentage?



Show students that multiplying by a % makes a number smaller while dividing by a % makes a number larger.



Discuss the comparison between our decimal currency and decimals to 2 decimals places as 100th.



Play fractions and decimals from Maths 'N' Movement to compare these to multiplication and division.

