BLOOMSM4TH

Makes Maths Fun

Level 6
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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BLOOMSM4TH
Makes Maths Fun

Level 6

Fractions & Decimals

Level 6 is designed for students in their sixth year at school often called Year 5. Students will compare, order and calculate with decimals, fractions and percentages.

Knowledge: Students will collect 10 shopping items and compare them when they are and are not rounded.

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

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

Comprehension: Students will use on-line shopping to compare fifteen identical items at different supermarkets.

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

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

Application: Students will calculate how much they would save as a percent of the cheapest price.

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

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

Analysis: Students will use the 5¢ rebate on fuel to calculate how much they would save on petrol for various tank sizes.

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

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

Synthesis: Students will see if taking a percentage amount off an item or a monetary amount is better.

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.
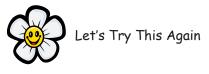
Name: _____

Knowledge

Using the table below write the price of 10 items you would normally buy at the supermarket such as bread, milk, eggs etc. In part 1 you need to add up the total price of these 10 items. In part 2 you will round each items up to the nearest 5 cents and see how this changes the price of your shopping.

Part 1: List the price for 10 items your family normally buys when shopping. You may need to use an online shopping website to help you find the prices.

ITEMS	PRICE
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
Total cost for 10 items:	

Part 2: Now round each item up so if an item ends with 1, 2, 3 or 4 cents it rounds to 5 cents. If it ends in 6, 7, 8 or 9 cents it rounds to 10¢. For example $1.34 would round to $1.35; $4.86 would round to $4.90. Recalculate the cost of the 10 items.

ITEMS	PRICE
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
New total cost for 10 items:	

Let's Try This Again   Progress To Comprehension

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Fractions & Decimals - Students will compare, order and calculate with decimals, fractions & percentages.

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

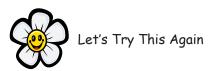BLOOMSMATH

Name: _____

Comprehension

For this activity you need to use on-line shopping to compare fifteen identical items at 2 different supermarkets. This is not about comparing a cheap spaghetti sauce with a brand name version but the exact same jar of spaghetti sauce at 2 different supermarkets.

For example a 560g jar of Vegemite costs $8.35 at Coles or Woolworths but is $8.90 at IGA.

See if you can find 15 items with a significant difference between 2 stores. This can include items on "special" that week for example Dolmio's Extra Bolognese Sauce is $2 this week at Coles but the regular $3.30 at Woolworths.

Once you have the 2 items calculate the savings if you purchased the item at the cheaper store. For example you would save 55¢ on the Vegemite and $1.29 on the sauce if you shopped at Coles.

Item	Store and Cost 1	Store and Cost 2	Saving if the cheaper item is purchased
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
		Total Saved Over the 15 Items:	

Let's Try This Again   Progress To Application

Fractions & Decimals - Students will compare, order and calculate with decimals, fractions & percentages.

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

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Name: _____

Application

Use the table from the Comprehension Activity to calculate the % saved with each cheaper item purchased compared to the more expensive item.
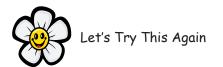
For example:

A 560g jar of Vegemite = $8.35 at Coles and $8.90 at IGA. This is a difference of 55¢. 55/835 x 100 = a 6.6% saving when purchased at Coles.

Dolmio's Sauce = $2 at Coles and $3.30 at Woolworths. This is a difference of $1.30. 130/200 x 100 = 65% saving when purchased at Coles on special.

Item	Saving	Cheapest Price	% Saved on the cheapest price
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

Let's Try This Again   Progress To Analysis

Fractions & Decimals - Students will compare, order and calculate with decimals, fractions & percentages.

Knowledge
Comprehension
Application
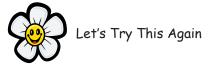Analysis
Synthesis
Evaluation

BLOOMS4TH

Name: _____

Analysis

Many supermarkets in Australia offer a 5¢ rebate on fuel when you spend over $50 in their store and purchase fuel at their garage. See if you can calculate how much you would save on petrol for each of these purchases.

To work this out it is the amount of fuel x 0.05 ie. 45L x 0.05 = $2.25 saving.

Amount of Fuel Purchased	x 0.05	
75L		
20L		
15L		
120L		
60L		
18L		
14.6L		
20.4L		
78.1L		
110.7L		
42.9L		
58.3L		

The same garages offer that if you spend $20 in store you will save an additional 5¢ making it 10¢ off per litre. How many litres of fuel would you need to purchase to make it worth spending an additional $20 at the garage?

Fractions & Decimals - Students will compare, order and calculate with decimals, fractions & percentages.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation

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Let's Try This Again

Progress To Synthesis

Name: _____

Synthesis

For this activity you will see if taking a percentage amount off an item or a monetary amount is better. For each item listed below take off the % given and the monetary amount given and choose which is a better deal.

Note: If you take 20% off an item you have 80% left. So a $25 item reduced by 20% is .8 x 25 which is $20. $2 off the item would leave it costing $23 so 20% is better. However 20% off an item costing $8 is .8 x 8 meaning it costs $6.40 while $2 off makes it just $6 which is better
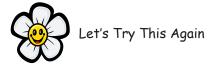
Original Price	$12	New Price
% Off	15%	
$ Off	$1.50	
Best Deal		

Original Price	$80	New Price
% Off	20%	
$ Off	$20	
Best Deal		

Original Price	$20	New Price
% Off	15%	
$ Off	1.50	
Best Deal		

Original Price	$50	New Price
% Off	5%	
$ Off	$5	
Best Deal		

Original Price	$75	New Price
% Off	25%	
$ Off	$25	
Best Deal		

Let's Try This Again

Progress To Evaluation

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

Fractions & Decimals - Students will compare, order and calculate with decimals, fractions & percentages.

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Evaluation

The following questions and activities are provide as a starting point for fun discussions related to Fractions & 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 & Decimals activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.

When should supermarkets round your items – for each item or at the end of your shop? Why?

Should they round up or down – why?

Which supermarkets were more expensive? Why do you think this might be?

Why can Aldi sell things more cheaply – Where are they cutting costs?

Does the 5¢ saving make it worthwhile to shop at Coles or Woolworths?

Is it easier to work with % off or $off an item?

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation

Fractions & Decimals - Students will compare, order and calculate with decimals, fractions & percentages.

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