 Pizza value

The problem

Which size pizza gives the best value for money? How can you decide on value?

Your investigation

You are to compare **three** different brands of pizza. You may choose to compare sizes and prices of different pizza shops, or you may choose to compare pizza shops to frozen varieties. Your task is to find out which size gives the best value for money.

Task 1 – Collecting the data

1. Decide which pizza shops or brands you will investigate. What things might you need to consider when collecting data?
2. Create a table similar to the one below to record the data you collect.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Place of purchase | Pizza type  (Such as Hawaiian) | S/M/L/Family | Diameter (cm) | Price ($) |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Task 2 – Analysing the data

1. Calculate the area of each pizza (show all of your working out!)
2. Write a rate for each pizza showing **area per price.** For example, area/price
3. Simplify each ratio to get **area per $1.** For example, area/$1

**Example**

17.5cm2 / $9.95 (both sides by 9.95)

1.76cm2 / $1

Task 3 – Drawing conclusions

1. You now need to answer the question ‘Which pizza is the best value for money and why?’
2. What are some factors you have not considered in comparing your pizzas?
3. Taking into account the above factors, would you change your conclusion as to which is the best value for money?
4. Some shops offer a “Four Corners” pizza, usually in a large size (this means four different varieties on one pizza). What advantages does this offer to:
   1. the shop owner?
   2. the customer?

Outcomes

* MA4-1WM communicates and connects mathematical ideas using appropriate terminology, diagrams and symbols
* MA4-2WM applies appropriate mathematical techniques to solve problems
* MA4-3WM recognises and explains mathematical relationships using reasoning
* MA4-7NA operates with ratios and rates, and explores their graphical representation
* MA4-13MG uses formulas to calculate the areas of quadrilaterals and circles, and converts between units of area