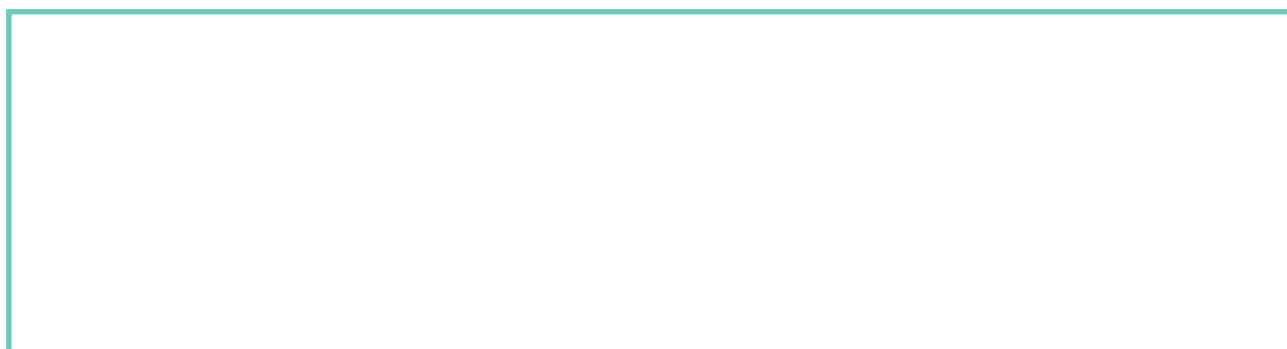


25. Ratio, Proportion and Rates of Change

Identifying good value for money when shopping online.

To save time, your parents repeat the same online food shop each week at the same supermarket. During a recent family discussion about the increases in cost of living, you suggested that they could bulk buy staple items and you could help them to shop around for better value options.

1. HealthyBites has two options for granola bars. Option 1 is a pack of 10 bars for £4.50 and Option 2 is a pack of 15 bars for £6.80. Calculate the unit price for each and comment on which option provides better value for money in terms of cost per granola bar.

A large empty rectangular box with a teal border, intended for the student to write their solution for the first problem.

2. FreshFruits stocks three orange juice brands. Brand A offers a 1.5-litre bottle for £2.25, Brand B offers a 1.25-litre bottle for £1.95, and Brand C offers a 750ml bottle for £1.30. What is the cost per litre for each brand?

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3. FreshFruits offers an organic bundle of 6 apples for £3.20 or their regular apples at 28p each. Meanwhile, HealthyBites sells a locally-sourced bundle of 15 apples for £4.75. Comment on the most cost-effective option as well as any other factors to consider.

4. At SuperFood, there are two brands of rice available. Brand X offers a pack of 600g for £2.10 or 200g microwavable pouches for £90p each. Brand Y offers a pack of 900g for £2.60 or a large 5kg bag for £13.50.

- a. Calculate the unit price for each option and determine which brand provides better value for money in terms of cost per gram.

- b. Comment on any other considerations that would factor into your buying decision.

5. EatLocal offers two options for bags of carrots:

Option 1: A 1kg bag of regular carrots for £1.80

Option 2: A 2.5kg bag of locally-sourced carrots for £4.50

The regular carrots have an estimated shelf life of 10 days, while the locally-sourced carrots have a shelf life of 14 days. Additionally, the store offers a loyalty card to promote buying local produce. You collect 10 loyalty points for every £1 spent on local products.

Loyalty card points can be redeemed once you have accumulated over 100 points. 100 points convert into a £1 voucher which can be redeemed on full priced local items in your next shop.

Taking into account the price per kilogram, shelf life, and loyalty card scheme, which option would you select and why?

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