

RATES, RATIO AND PROPORTION

REVISION KIT

TWO GRADES OF COFFEE ONE COSTING SH.42 PER KILOGRAM AND THE OTHER COSTING SH.47 PER KILOGRAM ARE TO BE MIXED IN ORDER TO PRODUCE A BLEND WORTH SH.46 PER KILOGRAM IN WHAT PROPORTION SHOULD THEY BE MIXED. (3MKS)

Two types of flour, X and Y, cost Ksh60 and Ksh 72 per kilogram respectively.

The two types are mixed such that the cost of a kilogram of the mixture is Ksh 70. Calculate the ratio X:Y of the mixture.

In a fund- raising committee of 45 people, the ratio of men to women is 7: 2. Find the number of women required to join the existing committee so that the ratio of men to women is changed to 5: 4 (3 marks)

A miller was contracted to make porridge flour to support a feeding program. He mixed millet, sorghum, maize and Omena in the ration 1:2:5:1. The cost per kilogram of millet was Ksh 90, sorghum Ksh 120, maize Ksh 30 and omena Ksh 150.

Calculate:

- (a) the cost of one kilogram of the mixture;
- (b) the selling price of 1 kg of the mixture if the miller made a 30% profit.

A trader bought maize for Ksh 20 per kilogram and beans for Ksh 60 per kilogram. She mixed the maize and beans and sold the mixture at Ksh 48 per kilogram. If she made a 60% profit, determine the ratio maize to beans per kilogram in the mixture.

a) The ratio of Jumas and Akinyis earnings was 5:3. Jumas earnings rose to Kshs 8400 after an increase of 12%

Calculate the percentage increase in Akinyis earnings given that the sum of their new earnings was kshs 14,100.

b) Juma and Akinyi contributed all the new earnings to buy maize at Kshs 1175 per bag. The maize was then sold at Kshs 1762.50 per bag. The two shared all the money from the sales of the maize in the ratio of their contributions.

Calculate the amount that Akinyi got.

ATIENO IS NOW FOUR TIMES AS OLD AS HER DAUGHTER AND SIX TIMES AS OLD AS HER SON. TWELVE YEARS FROM NOW, THE SUM OF THE AGES OF HER DAUGHTER AND SON WILL DIFFER FROM HER AGE BY 9 YEARS. WHAT IS ATIENO'S PRESENT AGE? (3MKS)

Mary invested sh 1 600 and Margaret sh 2 000 in a Kiosk. After six months, Loice joined them as a partner and invested sh 1 800. How should the three share the profit of sh 9 000 earned during that year?

By selling an article for sh 540, a tradesman makes a profit of 35% on his cost price. What would his profit per cent be if he sold it for sh 600?

A boy who was asked to find 15% of a sum of money misread the question and found 25% of it. His answer was sh 160. Find what the answer should have been.

A tennis court measures 25 m by 11 m and a hockey pitch measures 90 m by 45 m. Find the ratio of their (i) perimeters (ii) areas.

→ If the hockey pitch is enlarged in the ratio 10 : 9, find the ratio of its new perimeter and area to its original perimeter and area respectively.