

Mixture and Allegation-I

milk & water
 Alcohol & water
 Cu & Zn

Allegation
 Rule

milk & water
 2lt : 1lt
 2 : 1

2x 2 1x2
 2x4 2x2
 8 4

Allegation

R_1 (pr) ✓
 cheaper

R_2 (20/kg) ✓
 dearer
 d

R_1 & R_2
 1kg R_1 & 1kg R_2
 2kg R_1 & 2kg R_2

mean price
 (15/15) ✓
 m

mean cp

dearer - mean
 (d-m) ✓
 (20-15)

mean price - cheaper
 (m-c)
 (15-10)

$$\begin{aligned}
 \frac{\text{Quantity of cheaper}}{\text{Quantity of dearer}} &= \frac{d-m}{m-c} \\
 &= \frac{5}{5} = 1
 \end{aligned}$$

Q1. In what ratio must rice at ₹9.30 per kg be mixed with rice at ₹10.80 per kg so that the mixture be worth ₹10 per kg.

- (a) 8:7 (b) 7:8 (c) 5:6 (d) 4:6

Exact Rule

Cheaper (R_1) ✓

9.30

Dearer (R_2) ✓

10.80

10

$10.80 - 10$

$10 - 9.30$

~~0.80~~ ~~0.50~~

0.80

0.70

4:5 ✓

