



Problem of the Week

Problem E

Mixture of Three

Kanza is making and selling trail mix. She makes three different blends, each consisting of a mixture of cashews, dark chocolate, and almonds. All of these blends are sold at the same price of \$18 per kg.

If she mixes cashews, dark chocolate, and almonds in the ratio of 1 : 1 : 1, by mass, then she makes a profit of 20%.

If she mixes cashews, dark chocolate, and almonds in the ratio of 3 : 2 : 1, by mass, then she makes a profit of 8%.

If she mixes cashews, dark chocolate, and almonds in the ratio of 1 : 4 : 2, by mass, then she makes a profit of 26%.

- (a) What price, in dollars per kg, does Kanza pay for each of the cashews, dark chocolate, and almonds?
- (b) What percentage of a profit would she make if she mixes cashews, dark chocolate, and almonds in the ratio of 2 : 3 : 4, by mass?

