1) a) Jo = $\frac{1}{5} + \frac{1}{8} = \frac{8}{40} + \frac{5}{40} = \frac{13}{40}$

b) Hasim = $\frac{1}{3} + \frac{2}{7} = \frac{7}{21} + \frac{6}{21} = \frac{13}{21}$

c) Krystal = $\frac{2}{5} + \frac{3}{7} = \frac{14}{35} + \frac{15}{35} = \frac{29}{35}$

2) $\frac{2}{6} + \frac{3}{8} = \frac{16}{48} + \frac{18}{48} = \frac{34}{48}$

$2 - \frac{34}{48} = \frac{62}{48} = 1\frac{14}{48} = 1\frac{7}{24}$

$1\frac{7}{24}$ of the two cakes were eaten.

3) Children's answers will vary.

1) Both calculations give the answer $2\frac{8}{15}$.

Jo has used the method of regrouping one of the wholes so that she can subtract the wholes and fractions separately.

Hasim has used the method of converting the mixed numbers to improper fractions.

2) $\frac{1}{3} + \frac{1}{6} + \frac{1}{8} = \frac{8}{24} + \frac{4}{24} + \frac{3}{24} = \frac{15}{24} = \frac{5}{8}$

$1 - \frac{5}{8} = \frac{3}{8}$ so Hasim is correct.

1) First, we find the lowest common multiple of 12, 9 and 6 which is 36. We use this to show that the total mass of all three suitcases is $30\frac{21}{36}$kg or $\frac{1101}{36}$kg.

Next, we calculate the masses of the the two known suitcases using the 36 as the lowest common denominator:

Suitcase 1: $8\frac{5}{9}$kg = $8\frac{20}{36}$kg = $\frac{308}{36}$kg

Suitcase 2: $9\frac{1}{6}$kg = $9\frac{6}{36}$kg = $\frac{330}{36}$kg

Now we can calculate the total mass of the two known suitcases:

$\frac{308}{36}$kg + $\frac{330}{36}$kg = $\frac{638}{36}$kg

Finally, we can subtract the total of the two known suitcases from the whole, to find the mass of suitcase 3:

$\frac{1101}{36}$kg - $\frac{638}{36}$kg = $\frac{463}{36}$kg or $12\frac{31}{36}$kg

2) There are six possible answers. The six calculations in ascending order are:

$\frac{3}{6} + \frac{4}{10} + \frac{5}{12} = \frac{79}{60} = 1\frac{19}{60}$

$\frac{3}{6} + \frac{5}{10} + \frac{4}{12} = \frac{80}{60} = 1\frac{20}{60} = 1\frac{1}{3}$

$\frac{4}{6} + \frac{3}{10} + \frac{5}{12} = \frac{83}{60} = 1\frac{23}{60}$

$\frac{4}{6} + \frac{5}{10} + \frac{3}{12} = \frac{85}{60} = 1\frac{25}{60} = 1\frac{5}{12}$

$\frac{5}{6} + \frac{3}{10} + \frac{4}{12} = \frac{88}{60} = 1\frac{28}{60} = 1\frac{7}{15}$

$\frac{5}{6} + \frac{4}{10} + \frac{3}{12} = \frac{89}{60} = 1\frac{29}{60}$