Fair Shares

Groups of teachers are sent to check some places in London to see whether they would be suitable for a school trip. Different groups of teachers go to different places. The school provides the teachers with some large sandwiches for lunch. These are handed out to the different groups as shown in the picture.

1 a) In which group do the teachers get the most to eat? Explain your thinking.

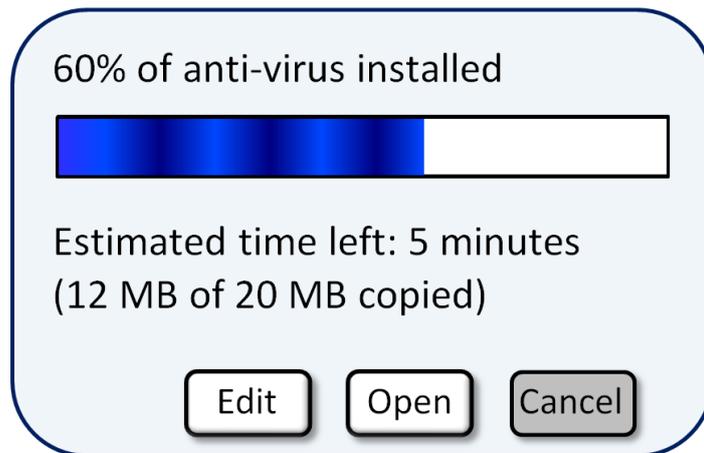   b) In which group do the teachers get the least to eat? Explain your thinking.

2 a) Draw a picture to show how you would share out the sandwiches between the teachers in Group A.

   b) Write down how much each teacher in Group A will get.

   c) Find a different way to share out the sandwiches equally in Group A. Draw a picture and write down how much each teacher will get.

Downloading Software

1. John wants to download a new game on his computer. First, he has to install some anti-virus software. After a few minutes the screen on his computer looks like this:

> 60% of anti-virus installed
>
> Estimated time left: 5 minutes
> (12 MB of 20 MB copied)
>
> Edit   Open   Cancel

a) John stares at the screen and wonders how accurately the blue bar represents the information. How can you tell how accurate it is?

b) How could you work out the total time the anti-virus should take to install?

Buying ribbon

1. Ellie buys 40cm of this ribbon. It costs her 60p.

a) Draw on the bar to work out the cost of
   (i)   20cm of ribbon
   (ii)   10cm of ribbon
   (iii)   80cm of ribbon
   (iv)   1m of ribbon
   (v)   90cm of ribbon
   (vi)   75cm of ribbon

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        20cm              40cm
┌─────────┬─────────┬─────────────────┐
│         │         │                 │
│         │         │                 │
└─────────┴─────────┴─────────────────┘
                60p
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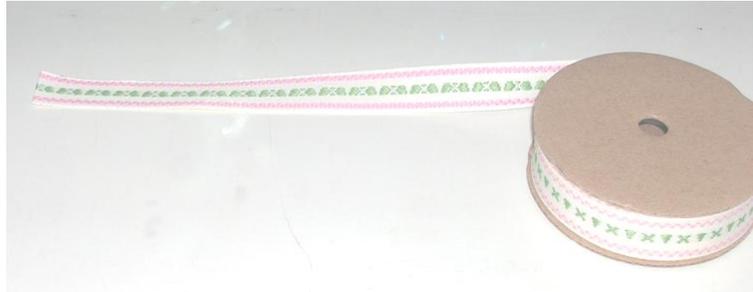Louise buys samples of 3 more types of ribbon as follows:

Sample A

40 cm of this ribbon cost 80p

Sample B

50 cm of this ribbon cost £ 1.10

Sample C

75 cm of this ribbon cost £ 1.80
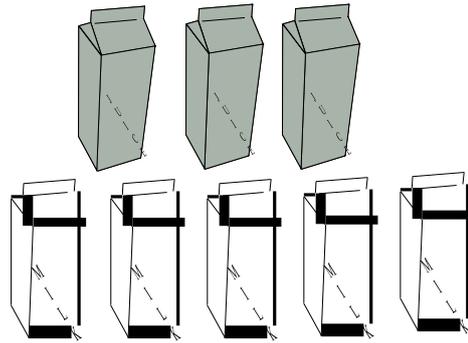

a) Draw a bar to represent each sample of ribbon

b) What else do you know about each ribbon? Use your bars to fill in some other quantities that you know the price of.

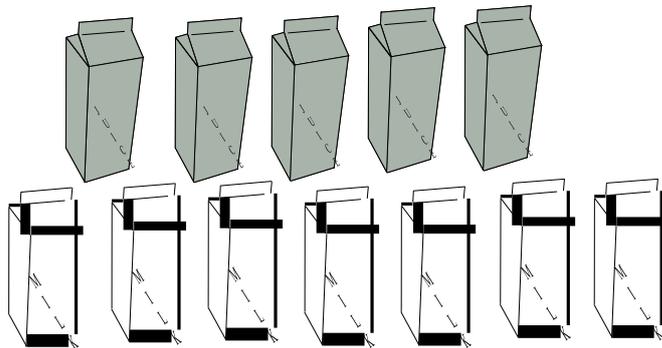c) Which of these three styles of ribbon would work out to be the most expensive?

Comparing Milkshakes

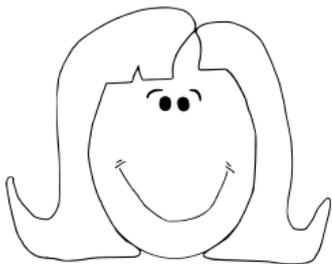Two batches of milkshake are made by mixing cartons of juice with cartons of milk:

Batch 1

Batch 2

Beth and Charlie can't agree on whether the two batches of milkshake will taste the same. Determine whether the two batches will taste the same, commenting on the two reasons given.

Both batches have two more cartons of milk than juice so they will taste the same.

In Batch 1, $\dfrac{3}{5}$ of the milkshake is juice.

In Batch 2, $\dfrac{5}{7}$ of the milkshake us juice, so they will taste different.