Pancake Maths

These are the ingredients to make pancakes:
2 eggs
100g flour
300ml milk
tablespoon of veg oil.

£1.30

£2.25

£3.05

500*ml*   1 litre   2 litres   3 litres
£0.54   £0.75   £1.00   £1.47

Using a medium sized pan, **12 pancakes can be made with these quantities**.

There are 6 houses in Crepe Close. This chart shows the number of pancakes they will make:

House number	pancakes	eggs	flour	milk
1	30	5	250g	750ml
2	24	4	200g	600ml
3	18	3	150g	450ml
4	6	1	50g	150ml
5	42	7	350g	1050ml
6	60	10	500g	1500ml

1. a) Copy and complete the chart showing how the quantities of eggs, flour and milk needed by each house.

2. a) How much milk will be used by all the houses? 4l 500*ml*
    b) Milk is available at the local supermarket in 500*ml*, 1 litre, 2 litre and 3 litre plastic cartons. If each family buys their own milk, how many of each carton will be bought? 2 x 500*ml*, 2 x 1litre & 2 x 2litre
    c) What is the total cost of the milk? £4.58

3. a) How many eggs will be used by all the houses? 30
    b) Eggs are sold in boxes or 6, 12 or 18. If each family buys their own eggs, how many of each box will be bought? How many eggs will be left over? 4 x 6eggs, 2 x 12eggs, 18 left over
    c) What is the total cost of the eggs? £9.70
    d) Mrs Jones in No 3 volunteers to buy all the eggs for the Close and deliver only what each house needs. What sized boxes will she buy? How many eggs will be left over? 1 x 18 eggs, 1 x 12 eggs; 0 eggs left over
    e) How much does Mrs Jones pay for all the eggs? £5.30
    f) How much did Mrs Jones save the Close by buying the eggs for them all? £4.40

4. Of the pancakes made in No 1, Mr Wilkins ate 1/6(5), Mrs Wilkins 1/5(6), Ted 15% (4 ½), Becca 0.2 (6), Ruby 2/15 (4) and the remainder were eaten by Elise (4½).
    a) Work out how many pancakes each person ate.
    b) What fraction of the pancakes was eaten by the 2 adults? 11/30
    c) Which 2 children ate the same number of pancakes? Ted & Elise
    d) What is the difference between the number of pancakes eaten by Mrs Wilkins and Elise? (1½)
    e) What is the ratio of pancakes eaten by Becca to those eaten by Ruby? 6:4 or 3:2

5.   Below is a chart showing how long each house took to cook pancakes.

House	Pancakes cooked	Time for 1 pancake (secs)	Start time	Total cooking time (mins)	Time pancakes all cooked
1	30	80	5:00	40	5:40
2	24	30	5:15	12	5:27
3	18	50	6:30	15	6:45
4	6	100	5:45	10	5:55
5	42	60	5:20	42	6:02
6	60	45	5:05	45	5:50

a) Copy and complete the chart.
b) Which house took the least time to cook their pancakes? 4
c) Which house took the longest time to cook their pancakes? 6
d) Which house finished cooking first? At what time did they finish? No 2—5:27
e) Which house finished cooking last? At what time did they finish? No 3—6:45
f) How long a gap was there between the house which finished first and the house which finished last? 1hr 18mins

6. Toppings

In No 1 there are 2 toppings on offer: maple syrup and lemon juice. There are 4 ways of eating pancakes at No 1: plain; with just maple syrup; with just lemon juice and with both maple syrup and lemon juice.

a)   In No 3 there are 3 toppings on offer: yoghurt, Golden Syrup and orange juice. How many ways can pancakes be eaten in No 3? Use letters: Y, S, J to show the different possibilities.
Plain, Y, S, J, Y & S, Y & J, S & J, Y S J = 8 ways

b)   In No 5 there are 4 toppings on offer: maple syrup (M), cream (C), banana (B) and pretzels (P). How many different ways can pancakes be eaten at No 5?
Plain, M, C, B, P, M & C, M & B, M & P, C & B, C & P, P & B, M C B, M C P, M P B, C P B, M C B P = 16 ways

c)   In No 6 there are 5 toppings on offer: melted chocolate (M), cheese (C), strawberries (S) pecans (P) and lemon juice (L). How many different ways can pancakes be eaten at No 6?

Plain, M, C, S, P, L, M & C, M & S, M & P, M & L, C & S, C & P, C & L, S & P, S & L, P & L, M C S, M C P, M C L, M S P, M S L, M P L, C S P, C S L, C P L, S P L, M C S P, M C P L, M S P L, M C S L, C S P L, M C S P L = 32 ways

d)   64 ways