INTRODUCTION

KEEPING UP WITH THE JONESES - A COMMON ENTRANCE (13+) WORKBOOK

This book is written as a lighthearted way to revise and practise predominantly level 2 Common Entrance 13+ work. However, the challenge questions are level 3 or CASE (Common Academic Scholarship Entrance) level.
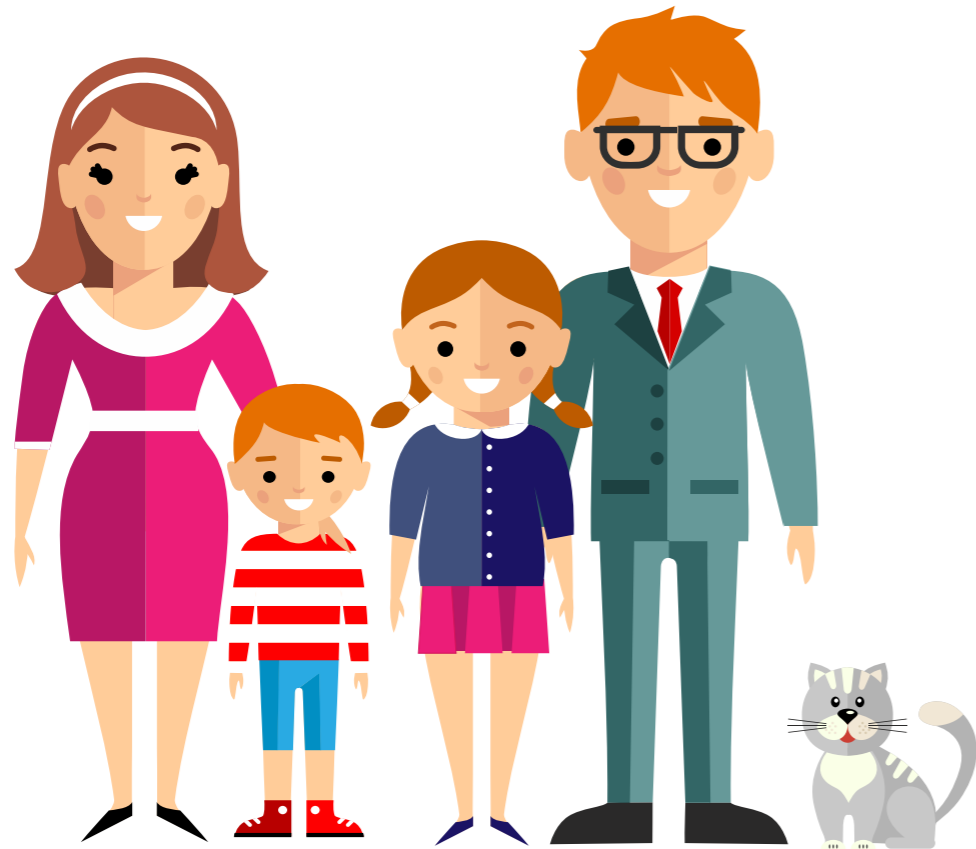
If you are looking to recap and revise maths at home with any year 8 pupil this should be a suitable level for Intermediate Key Stage 3.

Inevitably any "real life book" that tries to stick to a syllabus will be slightly false and not necessarily the mathematics that really surrounds all of us but this tongue-in-cheek book should give rise to potential mathematical conversations while providing valuable practice of exam style questions.

Meet the Jones family, they are a mathematical family that find maths in whatever they are doing. They are Mr and Mrs Jones, Henry Jones (aged 13), Elizabeth Jones (age 11) and their pet dog Sheba (after "The Queen of").

Their next door neighbours are the Carlisle family. Dr and Mrs Carlisle, Charlotte Carlisle (aged 13) and Jonny Carlisle (aged 5). They have a pet cat called Balkis (from The Butterfly that Stamped).

The Carlisle family are always trying to keep up with the Joneses.

The questions about the Jones family give you hints and tips as to how to solve the questions. If you need more help you will need to look back at your school notes.

You can get more practice on similar questions from the Carlisle family.

Each chapter has a mix of different questions so that you can revise lots of topics at the same time and get used to answering a mixture of questions.

All questions have space for all your beautiful mathematical workings, as well as the answers.

At the end of each chapter, there is a blank page for you to write your own questions about your family. You could also use this page for writing revision notes.

THE PARTY

Jones Questions

Mr and Mrs Jones love to entertain. Mrs Jones has a recipe for cheese straws.

> For 6 people:
> 370g plain flour
> 230g butter
> 210g cheese

1) a) Mrs Jones has 15 people coming to the party and is wondering how much of each ingredient she would need. How much butter would she need?

Hint: You can find out how much 3 people would need by dividing by 2 and then work out how much you need for 15 people by multiplying by 5

Answer: .... g (2)

b) Mrs Jones discovers that she only has 280g of Cheese. How many people will she be able to feed?

Hint: If you know how many grams are needed to feed 1 person, you can work out how many people 280g will feed.

Answer: .... people (2)

Mr Jones wonders how much this will cost.

2) a) Round the number of grams in the recipe for 6 people to 1 significant figure.

Flour .... g   Butter .... g   Cheese .... g (2)

.... g (1)

Price List

Flour costs 10p per 100g

Butter costs 38p per 100g

Cheese costs 85p per 100g

b) Using your answer to question 2a) and rounding the prices to 1 significant figure, estimate the cost of the recipe for 6 people. Give your answer to 1 significant figure.

Answer: £ .... (2)

3) Find the actual cost of 210g of cheese at 85p per 100g. Give your answer in pounds and pence.

Answer: £ .... (2)

Carlisle Questions

Mrs Carlisle has decided that she is going to have a tea party for Jonny and has found a recipe for shortbread.

For 4 hungry
shortbread lovers:

120g butter

50g caster sugar

180g plain flour

1) a) How many grams of butter will Mrs Carlisle need for 2 people?

Answer: .... g (1)

b) How many grams of flour will Mrs Carlisle need for 14 people?

Answer: .... g (2)

c) Mrs Carlisle discovered that she only has 315g of plain flour. How many people can she make shortbread for?

Answer: .... people (2)

2) Mrs Carlisle has 480g of butter.

a) Write 480 to 1 significant figure.

Answer: .... (1)

Butter costs 43p per 100g.

b) Write 43p to 1 significant figure.

Answer: .... (1)

c) Using your answers to questions 2a) and 2b), approximate how much the butter cost her?

Answer: £ .... (1)

d) How much did the butter actually cost her?

Answer: £ .... (2)

Challenge Questions

1) In order to keep up with the Joneses, Mrs Carlisle decides to have a huge party and invites the whole of Jonny's school. She knows that there are fewer than 300 students in total.

She worked out earlier that she could divide the children exactly into tables of seven or eight.

a) What is the least number of children that she could have invited?

Answer: .... children (2)

b) In the end, between 100 and 150 children accepted the invitation. How many children does she have coming to the party?

Answer: .... children (3)

2) Jonny and Charlotte decide to share a Birthday cake. Jonny's piece is 40% bigger than Charlotte's. What fraction of the cake does Jonny eat?

Answer: ……………………………… (3)

CHAPTER 7

THE SKIING HOLIDAY

Jones Questions

The Joneses love to ski in Val d'Isere.
This year the exchange rate was £1.00 (Pound) = €1.4 (Euro)

1) a) How many Euros would Mr Jones get if he exchanged £750.

Hint: When you exchange from Pounds to Euros you need to multiply by the exchange rate.

Answer: .... Euros (2)

b) Mrs Jones' hot chocolate in the mountain café cost €8.05. How much is this in pounds?

Hint: When you convert back you have to do the opposite. So divide by the exchange rate.

Answer: £ .... (2)

c) The exchange rate is now £1.00 = €1.4
   Last year the exchange rate had been £1.00 = €1.2.

What is the percentage increase from last year to this year?

Hint: Useful formula to learn.

$$Percentage = \frac{difference}{original} \times 100$$

Answer: .... (2)

d) Elizabeth said this was a good thing as you got more Euros for each Pound you spend.

Is she correct and why? ....

e) Why does the exchange rate matter to us in the UK? ....

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