

Working in tourism Answering questions



- As a tour guide, you are asked **all sorts of questions**.
- People want answers straightaway – they usually don't mind if the answers are **approximate**.
- Work as a group to answer the six questions on the cards.

Working in tourism Answering questions cards

I've been quoted **£135** for **three days hire car**.



How much will they charge for four days?

My friend just got **120 Danish kroner** for £15.

How much will I get for **£20**?



How much petrol will it take to get to Paris?

Paris 75 km
Orleans 165 km

Well, it took me **30 litres** to get to Orleans yesterday.

That boat trip costs **23 euros** – about how much is that in pounds?

I just got **55 euros** for **£50**.



Water skiing basic offer:



1 x 10 minute starter session plus 4 x 10 minutes on the water. **£60**



Sessions are costed by the minute.

The water skiing extended offer is for 1 x 10 minute starter session plus 8 x 10 minute on the water.

How much will it cost?

Wimereux 12 km
Calais 42 km

I'm going to **Wimereux on the Calais bus**.

It takes 1 hour 10 minutes to Calais – when should I get to Wimereux if the bus leaves at 9.30am?

Working in tourism What does it cost?

What is the total cost for a night in each of these hotels?

Lisbon 47 euros + VAT



Copenhagen 76 Danish kroner + VAT



Limassol 34 euros + VAT



London £56 + VAT



Country	VAT	Country	VAT
Austria	20%	Italy	20%
Belgium	21%	Malta	18%
Croatia	23%	Poland	22%
Cyprus	15%	Portugal	20%
Denmark	25%	Spain	16%
Greece	19%	Sweden	25%
Iceland	24.5%	Switzerland	7.6%
Ireland	21.5%	United Kingdom	17.5%

Sometimes, tour guides have to do the calculation the other way round.

What will the price per night in Rome be before VAT is added?

Rome 72 euros including VAT



Working in tourism Which is best?

In Portugal VAT is 20%.
Before VAT, a trip round the bay costs 15 euros. *How can I work out the VAT?*

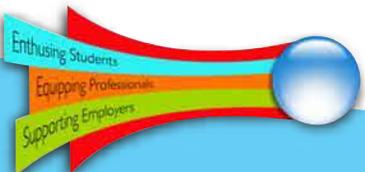
Work out 10%, that's easy, and double it to get 20%.

Divide by 100 to get 1% then multiply by 20.

Well, 20% is a fifth so just divide by 5.

Do all these methods work?
Find some other ways to work out the VAT.

*Which method is **best** to use when?
Which methods work with **any** numbers?*



Working in tourism

Topic

This topic concerns the use of ratio and proportion in the tourist industry. It encourages the pupils to think flexibly, to problem solve and to use common sense and approximation.

Planning for teaching

Ratio and proportion are often poorly understood by mathematics learners. This topic gives pupils the opportunity to develop a “feel” for ratio and proportion and to devise their own methods of calculation **before** being introduced to a formal method. **Answering questions** offers a number of tourism scenarios and invites the pupils to come up with their own methods for solving the problems. Working in groups of two to four encourages a problem solving approach and will provide the opportunity for comparing a variety of approaches – both between different scenarios and amongst the members of the group.

The theme is continued in **What does it cost?** The pupils have to be able to link the cities to the countries. You may do this through a whole class discussion or through studying a map of Europe. Again, no formal method is offered and pupils will need to work out their own approach.

Please note exchange rates shown are as at July 2010.

Mathematical activities

Answering questions

What does it cost?

Which is best?

The variety of approaches is made explicit in **Which is best?** The pupils try all three approaches to prompt their awareness that many different ways of solving the question are possible. Encourage them to find additional methods and to show these to a partner. For example, to get 1%, divide by 10 and then divide by 10 again. Extend this method to find 0.5% or 0.1%. Introduce the idea of using a calculator and ask what difference that might make to which method is best. A whole class discussion will draw the topic activities together.

Careers link-up

Ask the pupils: is a career in tourism the right job for you? The careers link-up focuses on what it takes to enjoy and succeed in a tourism career.



Start with two video clips from people working in the tourism industry who both love their work. A short clip at [CareersBox Careers Films Online](#) features a young travel adviser who entered the tourism industry via an apprenticeship. Another short clip at [icould – Eszter Szabados](#) features Eszter Szabados who needed mathematics to study Economics at university. Eszter currently heads a team of receptionists at the Coppid Beech Hotel. She initially studied Economics at university but didn't enjoy it so after a gap year she changed to Economics of Tourism and Hospitality Management and now thoroughly enjoys her work.

Pupils can search for tourism on [Jobs4U](#), the main Connexions site for young people giving details about different job families, and find out the skills involved in tourism careers. This site also has further case studies featuring people working in a wide range of jobs in the industry.

Working in tourism

Linking with the wider curriculum

Curriculum link to careers education:

Economic wellbeing, Career, Capability, Risk, Economic understanding, Personal Wellbeing, Personal Identities.

Further resources and activities:

Find out about what people working abroad think about their jobs. **Languages Work** is funded by the TDA to support language choice. There are a number of case studies of people using STEM subjects abroad. **Air Systems Engineer – Gethin and Section Head of Technical Health Safety and Environment (HSE) Compliance – Shahana** are useful examples. Check out Jessica's role as a food technologist that takes her round the world. **Steve Shaw, Perfect Trip manager** is passionate about mathematics.

Careers links:

Future Morph: Take A level science, technology, engineering and maths for exciting careers has two parts – with case studies and clips of people – backed up with a wide range of resources.

Maths Careers is the main site hosted by the mathematics community which has a wide range of information and resources.

icould and **CareersBox Careers Films Online** have short clips of people covering a huge range of careers that can be searched for suitable topics.



Want to know more?

Contact STEM Subject Choice and Careers
info@careersinstem.co.uk

The Centre for Science Education
Sheffield Hallam University
City Campus, Howard Street
Sheffield S1 1WB

Tel: 0114 225 4870

or for more information on careers go to Maths careers at www.mathscareers.org.uk/
or Future Morph at www.futuremorph.org/

A Department for Education initiative to promote subject choice and careers in Science, Technology, Engineering and Maths (STEM) delivered by the Centre for Science Education at Sheffield Hallam University and Babcock.

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