

Discussion points and research activities for Maths students (Secondary)

Notes to Teachers: these tasks are best suited to students over the age of 13 because they focus attention on the eventual fate of the refugee passengers and the shocking statistics which show that, unknown to passengers, a simple choice reduced or increased the chance that the Nazis would murder them.

Teachers of younger students will find suitable resources on our website:
<http://education.hmd.org.uk/age-range>

These activities are linked with **Untold Stories** from the SS St. Louis case study.
<http://education.hmd.org.uk/case-studies/the-ss-st-louis/read>

Introduce the **Untold Stories** from the St Louis <http://education.hmd.org.uk/case-studies/the-ss-st-louis/read>. **Present** the stories in your own words then **give** students a copy of the case study and **ask** them to refer to it to help them work out the answers to the questions. Some of the answers lead to sad and shocking conclusions so **allow** time for students to reflect and respond to the implications contained in their calculations and **be prepared** for some discussion on how making a simple choice improved or weakened the chance of a new future. **Explain** that Maths is a powerful tool which helps us think carefully about the scale of the Holocaust. The eventual fate of the refugees on the St Louis becomes starkly clear when people take time to think carefully and mathematically about the implications in the numerical figures.

In the **Untold Stories** of the St Louis the percentages which the students need for the tasks show that the final choices the passengers made when asked where they would disembark effectively sealed their individual fates as the Nazis implemented the policies which led to their 'Final Solution'. Maths helps us to unpack another **Untold Story** which we find within the original story. It is important to remember that the student mathematicians are helping to share these additional **Untold Stories** by showing what the percentages and statistics often quoted in historical accounts really mean. They actually represent the fate of individual human beings.

Give students a copy of the following statements. **Ask** them to refer to these statements when they answer the questions.

Facts and Figures

1. 907 of the St Louis passengers reached Europe.
2. 23.6% (to one decimal place) of passengers were offered asylum by Belgium
3. 288 were taken in by the UK. All survived the Holocaust.
4. 33.1% (to one decimal place) of passengers welcomed by The Netherlands survived the Holocaust.
5. Exactly 3 times as many passengers survived in France as in the Netherlands.
6. France took 10 more passengers than Belgium.
7. Just over 71% of passengers who settled in Belgium survived the Holocaust.

Questions

Use your maths skills to help you share the **Untold Stories** of the fate of the St Louis passengers with other people.

1. Complete this table of survival. Remember when dealing with percentages you may need to round your answers up or down to the nearest whole number because you are thinking about numbers which represent individual people.

	Number of Passengers given asylum	Number of Passengers surviving the Holocaust
UK		
Belgium		
France		
The Netherlands		
Total	907	

2. How many St Louis passengers reached Europe but were eventually murdered in the Holocaust?
3. Which country had the lowest survival rate for the refugee passengers?
4. The numbers you have worked with so far were based on the first attempts to discover what had happened to the passengers. As more evidence is uncovered about the Holocaust we often discover that more people than we initially thought died. Sadly more recent research shows that only 653 of the passengers who reached Europe survived. By what percentage did the earlier research over estimate survival rates?

Answers - for use by the teacher only

There are several ways to work out the answers. You could **challenge** older students to use simultaneous equations. Assign letters such as passengers in Belgium (B) survivors in Belgium (b) etc and translate the statements as follows

1. $B+F+N+U=907$
2. $23.6\% \times 907=B$
3. $U = u = 288$
4. $n = 33.1\% \times N$
5. $F= 3 \times n$
6. $F= B+10$
7. $b=71\% \times B$

Using 1 and 3 $B+F+N=619$

Using 2 $B= 214.052= 214$

Using above two lines $F+N= 619-214=405$

Using 2 and 6 $F=214+10 =224$

Using above two lines $N= 405-224 = 181$

Using 4 and above line $n= 33.1\% \times 181 = 60$

Using 5 and above line $f=3 \times 60= 180$

Using 2 and 7 $b=71\% \times 214=152$

	Number of Passengers given asylum	Number of Passengers surviving the Holocaust
UK	288	288
Belgium	214	152
France	224	180
The Netherlands	181	60
Total	907	680

Perceptive students may notice that the number of passengers returning to Europe is fewer than the number originally leaving Hamburg. 1 elderly passenger died on board ship before reaching Cuba and 29, who were not regarded as refugees, left the St Louis in Havana. If students wish to follow up individual stories on the fate of the passengers you can **give** them access to the most complete lists of passengers and their eventual fate by following the links to the most up to date records which you will find at the end of the secondary historical enquiry.

http://education.hmd.org.uk/assets/downloads/History_Secondary_FINAL.pdf

Maths and History students could work together to further investigate the stories of individual passengers.