


CAN YOU CATCH THE THIEF?

Fractions and Decimals

Section 1: Who is the Thief?

One of the below suspects has robbed Mr Sunshine. Each suspect worked out each question. The guilty person has 4 errors. (errors are marked)

Question	Mark	Zac	Paul	Sarah
$\frac{1}{4}$ of the shape is shaded. 	Correct	Correct	Not Correct	Not Correct
Two fractions are equal if the numerator is the same in both fractions.	Not Correct	Not Correct	Not Correct	Not Correct
These decimal fractions are ordered in ascending order – 0.42, 4.2, 4.22, 42, 42.2	Not Correct	Not Correct	Correct	Not Correct
$\frac{8}{100} = \frac{8}{10} = \frac{4}{5} = 0.45$	Not Correct	Not Correct	Correct	Not Correct
$\frac{5}{8}$ of 40 = 64	Not Correct	Correct	Correct	Not Correct
Max buys 40 flowers. 8 of the flowers are roses and the rest are daffodils. What fraction of the flowers are daffodils? $\frac{1}{5}$ are daffodils	Not Correct	Not Correct	Correct	Not Correct

Section 2: When did the robbery take place?

True or False to find the time and date of the robbery.

$4\frac{1}{3}$ is a mixed number	If it is True , the robbery took place at 3:15 pm	If it is False , the robbery took place at 4:15 pm
$\frac{1}{4} > 0.5$	If it is True , the robbery took place on the 12th May	If it is False , the robbery took place on the 15th May

Section 3: Where did the robbery take place?

Read and Solve this problem to find out where the robbery took place.

Mark and Fiona each make a tower using red and yellow cubes.

Their towers are the **same height**.

$\frac{3}{8}$ of Mark's tower are red cubes.

$\frac{5}{6}$ of Fiona's tower are red cubes.

Mark uses **9 red cubes**. How many **red cubes** does Fiona use?

If the answer is **more than 25** the robbery took place in **Rabat (Gozo)**

If the answer is **less than 25** the robbery took place in **Rabat (Malta)**

Example of working A – Working Backwards:

$$\frac{3}{8} \text{ of } \underline{\quad} = 9$$

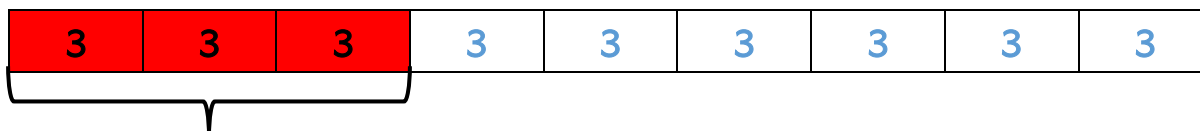
$9 \times 8 = 72$, $72 \div 3 = 24$ cubes
(Mark and Fiona both used 24 cubes)

So Fiona's red cubes = $\frac{5}{6}$ of 24 = $24 \div 6 = 4$, $4 \times 5 = 20$ red cubes.

or

Example of working B – Bar Model:

Mark $\frac{3}{8}$ are red



9 red cubes

Therefore, if 9 cubes are red then Mark's Tower is 24 cubes long.

If Fiona's tower is 24 cubes long, then $\frac{1}{6}$ of 24 = 4



$\frac{5}{6}$ of 24 = 20 red cubes

Fiona has 20 red cubes.

Let's Catch the Thief

The robber is: **Paul**

The robbery took place on the **15th May** at **3:15 pm**.

The robbery took place in **Rabat (Malta)**.