## Where in the world is our agent?

An investigation involving estimation, formula and addition.

- Top government agents have produced a secret code. Can you study the code and explain the formula?
abcdefghijklm
$1 \begin{array}{llllllllllll}10 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 12 & 13\end{array}$


## Secret country code breaker

n o p q r s t u v wx y z 14151617181920212223242526

- Each letter has a value which is equal to the position it has in the alphabet.
- A is the first letter $=1$
- $B$ is second $=2$
- $Z$ is last, so = 26

Where in the world is this?

$\begin{array}{llllll}6 & 18 & 1 & 14 & 3 & 5\end{array}$

# Can you add up the numbers to give the country a quick code number? 

$6+18+1+14+3+5=$

## How do you add up?

$6+18+1+14+3+5=$

Along the line?
Tens first then units?
Units then tens?
Big to small?

- How do you add?
$6+18+1+14+3+5=$

6+14 18+1 3+5
20
19
8

20
20
7

- Where in the world?


France is worth 47..... Can you predict which country has the most points?

- Latvia
- England
- Greece


## Why did you think this?

- Latvia
- England
- Greece


## Can you work out the number codes for

- Latvia
- England
- Greece


## Can you work out the number codes for

- Latvia


$$
\eta=
$$

- England
- Greece


## Can you work out the number codes for

- Latvia
12
1
20
229
$1=65$
- England
- $5 \quad 14$
- Greece


## Can you work out the number codes for

- Latvia
12
1
20
229
$1=65$
- England
- 514
- 718553 5 =



## Where is code 100?

Wales
Turkey
India

America

Egypt

Denmark
Holland

Australia

Venezuela

Germany

New Zealand
Zimbabwe

Italy
Canada
Japan
and where shall we take him to hide? (the smallest total)

## Where is code 100 answers.

Wales

Turkey 100

India

America

Egypt

Denmark

Holland

Australia

Venezuela

Germany

New Zealand

Zimbabwe

Italy

Canada 24

Japan
and where shall we take him to hide? (the smallest total)

The code was too easy to break.
I have designed a new code using a formula of numbers for letters but I have lost my code breaker. All I have are the names of 6 countries and their codes but they are muddled.

Can you sort them out and work out the formula of the new code?

## a bcdefghijklm

New code breaker
n op q r s t u v wx y z

## Country Codes

- Croatia

$$
\begin{array}{lllllll}
5 & 35 & 29 & 1 & 39 & 17 & 1
\end{array}
$$

- Bulgaria

$$
3412313135171
$$

Can you work out the new code breaker?

# a b c defghijkl m <br> 135791113151719212325 

New code breaker

$$
\begin{array}{lllllllllllll}
n & o & p & q & r & s & \dagger & u & v & w & x & y & z \\
27 & 29 & 31 & 33 & 35 & 37 & 39 & 41 & 43 & 45 & 47 & 49 & 51
\end{array}
$$

## Create your own message in code

$\begin{array}{llllllll}7 & 29 & 27 & 39 & 11 & 29 & 35 & 13 \\ 9 & 39 & 39 & 29\end{array}$

1727323417949294135

32979 !

