

## Bronze

1a. The ones and the tenths columns would change. The new digits would be 1 in the ones and 0 in the tenths.

2a.  $0.4 + 0.6 = 1$

$1 - 0.4 = 0.6$  or  $1 - 0.6 = 0.4$

3a.

0.01	0.99
1	

4a. False because  $0.62 + 0.48 = 1.1$

5a.  $0.19$      $0.87$

1b. Nick is incorrect. The 2 digits must be number bonds to ten.

2b.

Ones	Tenths	Hundredths
0	Sum of 9	Sum of 10

3b.  $0.11 + 0.89$  is the odd one out because it is a complement to 1; the others aren't.

## Silver

6a. The hundredths and tenths columns would change. The new digits would be 1 in the hundredths (0.01) and 5 in the tenths (0.5)

7a.  $0.37 + 0.63 = 1$

$1 - 0.63 = 0.37$  or  $1 - 0.37 = 0.63$

8a.

0.014	0.986
1	

9a. False because  $0.709 + 0.391 = 1.1$

10a.  $0.933$      $0.716$

4b. Gareth is incorrect. The digits will always either be both odd or both even as they will be number bonds to 10.

5b.

Ones	Tenths	Hundredths	Thousandths
0	Sum of 9	Sum of 10	0

6b.  $0.023 + 0.087$  is the odd one out because it is not a complement to 1; the others are.

## Gold

11a. The tenths, and the thousandths columns would change. The new digits would be no digit in the thousandths and 6 in the tenths.

$$12a. 0.635 + 0.365 = 1$$

$$1 - 0.635 = 0.365 \text{ or } 1 - 0.365 = 0.635$$

$$13a. 0.914$$

$$14a. \text{ False because } 0.779 + 0.231 = 1.01$$

7b. Anaya is incorrect. The digits are all greater than 0, however they are less than or equal to 9 not greater than or equal to 9.

8b.

Ones	Tenths	Hundredths	Thousandths
0	Sum of 10	0	0

9b.  $0.903 + 0.007 + 0.09$  is the odd one out because it is a complement to 1; the others aren't.

## Challenge

1. Work out the value of the shapes below. Write each answer to 3dp.

$$\triangle = 0.250$$

$$\star = 0.500$$

$$\text{pentagon} = 0.125$$

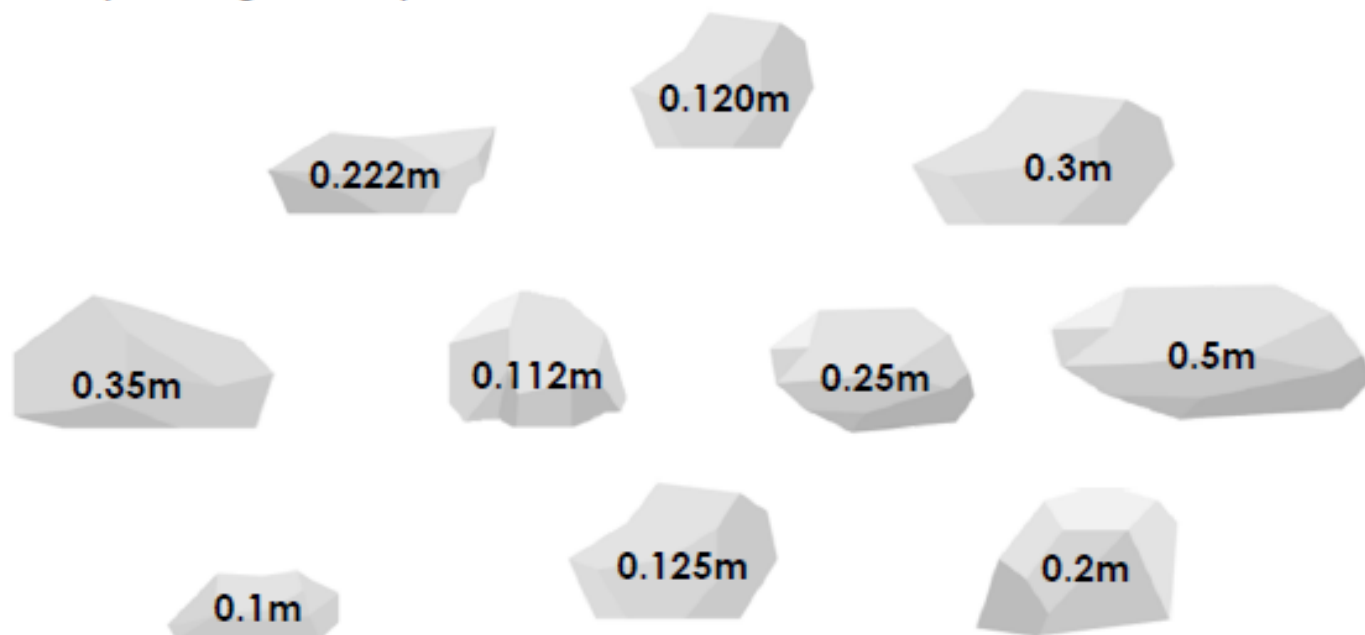
What decimals could the shapes below represent? How many answers can you find?

Various possible answers, for example:

$$\text{circle} = 0.3$$

$$\text{octagon} = 0.1$$

2. Use a combination of the rocks below to build a dry stone wall which measures exactly 1m long. You may use each rock more than once.



How many different combinations can you find?

Various possible answers, for example:

$$0.222\text{m} + 0.222\text{m} + 0.222\text{m} + 0.222\text{m} + 0.112\text{m} = 1\text{m}$$