Mrs. Gregory & Mrs. Postlethwaite's group – Reasoning and problem solving answers

Bronze

1a. Various possible answers, for example: 0.3 + 0.1 + 0.6 = 1, 0.3 + 0.2 + 0.5 = 1, 0.3 + 0.3 + 0.4 = 1

2a. Toby is not correct. He has made 1.1 because he has forgotten to include the 0.1. He needs to add 0.6 instead.

3a. Two toy cars are 0.8m long so they will fit on the bridge with 0.2m of space left over.

1b. Various possible answers, for example: 0.1 + 0.4 + 0.5 = 1, 0.2 + 0.4 + 0.4 = 1, 0.3 + 0.4 + 0.3 = 1

2b. Mary is incorrect. She has made 1.2 because she has forgotten to include the other 0.2. She needs to add 0.6 instead.

3b. Three glasses of water are 0.9l so the bottle will fill the glasses with 0.1l of water left over.

Silver

4a. Various possible answers, for example: 0.51 + 0.49 =1, 0.52 + 0.48 = 1, 0.53 + 0.47 = 1, 0.54 + 0.46 =1, 0.55 + 0.45 = 1, 0.56 + 0.44 = 1, 0.57 + 0.43 = 1, 0.58 + 0.42 = 1, 0.59 + 0.41 = 1

5a. Josh is not correct. He has made 1.1 because he has forgotten that his hundredths will make an extra tenth. He needs to add 0.83 instead.

6a. Two place mats are 0.64m long so they will fit on the table with 0.36m of space left over.

4b. Various possible answers, for example: 0.03 + 0.97 = 1, 0.13 + 0.87 = 1, 0.23 + 0.77 = 1, 0.33 + 0.67 = 1, 0.43 + 0.57 = 1, 0.53 + 0.47 = 1, 0.63 + 0.37 = 1, 0.73 + 0.27 = 1, 0.83 + 0.17 = 1, 0.93 + 0.07 = 1

5b. Gemma is not correct. She has made 0.99 because her hundredths only add up to 0.09. She needs to add 0.85 instead.

6b. Two cupcakes cost £0.96 so Amir can buy them with £0.04 left over.

Gold

7a. Various possible answers, for example: 0.31 + 0.42 + 0.27, 0.32 + 0.43 + 0.25, 0.33 + 0.44 + 0.23, 0.34 + 0.45 + 0.21, 0.31 + 0.41 + 0.28, 0.32 + 0.42 + 0.26, 0.33 + 0.43 + 0.24, accept any solution where the hundredths digits add up to 1 tenth.

8a. Owen is not correct. He has made 1.1 because he has forgotten that his hundredths will make an extra tenth. He needs to add 0.41 instead.

9a. Three bowls need 0.87kg of flour so there is enough flour in the bag with 0.13kg left over.

7b. Various possible answers, for example: 0.15 + 0.11 + 0.74, 0.15 + 0.21 + 0.64, 0.25 + 0.31 + 0.44, 0.35 + 0.41 + 0.24, 0.45 + 0.51 + 0.04, 0.25 + 0.21 + 0.54, 0.35 + 0.31 + 0.34, accept any solution where the tenths digits add up to 9 tenths.

8b. Asha is not correct. She has made 1.99 because her hundredths only add up to 0.09. She needs to add 0.32 instead.

9b. Three packs of sweets cost £1.68 so Rob can buy them with £0.32 left over.