1) Complete the table.

	Round to the nearest 10	Round to the nearest 100	Round to the nearest 1000	Round to the nearest 10 000
52 254				
12 989				
75 348				

2) What could the starting number be for each row?

	Round to the nearest 10	Round to the nearest 100	Round to the nearest 1000	Round to the nearest 10 000
	43 820	43 800	44 000	40 000
	43 830	43 800	44 000	40 000
	43 970	44 000	44 000	40 000

1) Mateo says that if he rounds 85 995 to the nearest 10, 100, 1000 and 10 000, he will get the same answer. Ben disagrees. Who do you agree with? Explain your answer and prove it!

2) Esther is looking at how many people went to see a concert. She says that, rounded to the nearest 10 000, the number of concert goers was 90 000.

a) Exactly how many people could have attended? Can you give three different possible answers?

b) What are the fewest and greatest numbers of people that could have attended? How do you know?

1) Geri has some 0-9 digit cards. Using **all** the digit cards only **once**, she says that she can make two numbers that, when rounded to the nearest 10 000, are the same number. What could these numbers be?

1	2	3	4	5
6	7	8	9	0

2) Using **all** the digit cards only **once**, is it possible to make two numbers that, when rounded to the nearest 10 000, make 10 000? Explain your thinking.

ANSWERS

1)

	Round to the nearest 10	Round to the nearest 100	Round to the nearest 1000	Round to the nearest 10 000
52 254	52 250	52 300	52 000	50 000
12 989	12 990	13 000	13 000	10 000
75 348	75 350	75 300	75 000	80 000

2)

	Round to the nearest 10	Round to the nearest 100	Round to the nearest 1000	Round to the nearest 10 000
43 815 – 43 824	43 820	43 800	44 000	40 000
43 825 – 43 834	43 830	43 800	44 000	40 000
43 965 – 43 974	43 970	44 000	44 000	40 000

1) Ben is correct. Rounded to the nearest 10, 85 995 is 86 000. Rounded to the nearest 100, it is 86 000. Rounded to the nearest 1000, it is 86 000. Rounded to the nearest 10 000, it is 90 000.

2) Esther is looking at how many people went to see a concert. She says that, rounded to the nearest 10 000, the number of concert goers was 90 000.

a) Possible answers include 85 000, 85 123 and 86 352. Answers must lie between 85 000 and 94 999.

b) The fewest possible number of concert goers is 85 000. The greatest is 94 999.

1) There are many possible answers, for example 18 490 and 23 675 both round to 20 000. 34 980 and 27 516 both round to 30 000.

2) This is not possible. To be 10 000 when rounded to the nearest 10 000, both numbers would need to be between 9500 and 10499. As you have to use all of the digit cards, both numbers would need to be 5 digits and as you can only use each card once, it is impossible to make a two numbers with one ten thousand.