Round to estimate and approximate

1 Rosie is working out 2,937 + 1,870

Rosie rounds each number to the nearest 1,000 to estimate the answer.

Complete the sentences.

2,937 rounded to the nearest 1,000 is ☐

1,870 rounded to the nearest 1,000 is ☐

Rosie's estimate for the answer is

☐ + ☐ = ☐

Work out the actual answer.

2 Round each number to the nearest 10,000 to estimate the answer to the calculations.

a) 12,063 + 29,580 **b)** 47,640 – 9,485

3 Annie works out 7,320 + 912

Use approximations to show that Annie is incorrect.

4 Complete the calculations.

Use approximations to check your answers.

a) 3,845 km + 7,006 km **c)** 79,382 – 8,716

b) 873 + 9,618 **d)** £12,005 + £3,978 – £6,172

5 The table shows the number of people of different ages living in three towns.

	Town A	Town B	Town C
Under 16	3,765	8,283	10,301
16 to 65	35,835	14,100	24,554
Over 65	1,949	9,821	656

Estimate which town has got the greatest population.

6 Are these statements correct? How do you know?

a) 29,999 – 9,999 = 30,000 – 10,000

b) 17,550 + 10,570 > 17,550 + 9,985

c) 17,990 + 75,980 – 17,990 = 12,975 + 75,980 – 12,975

7 Mo has made a mistake with this calculation.

Use rounding and approximating to show how you know.

$$\begin{array}{rccccc} & & 6 & {}^{1}3 & {}^{1}2 & \\ & 1 & \cancel{7} & \cancel{4} & \cancel{3} & {}^{1}2 \\ - & & 8 & 4 & 8 & 7 \\ \hline & 1 & 8 & 9 & 4 & 5 \end{array}$$

8 Mr Khan writes this question on the board.

7,395 – 711

Dexter's estimate is 7,000 – 1,000 = 6,000

Whitney's estimate is 7,400 – 700 = 6,700

Whose estimate do you agree with?

Explain your answer.

Work out the actual answer.

Whose estimate was the closest?

Talk about it with a partner.

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