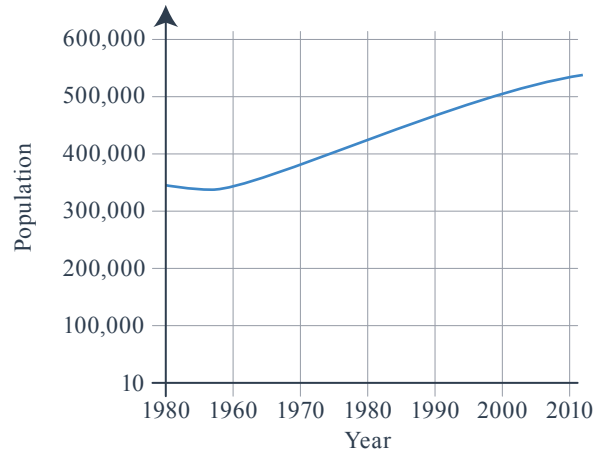**Q1** Look at this line graph. It shows the population of a town in Norfolk.

a In which year did the population reach 450,000 for the first time?

1985

1 mark

b By how much did the population increase in the 40 years **before** the year 2000?

150,000

1 mark

Q2 Round 94,516

to the nearest 10: **94,520**
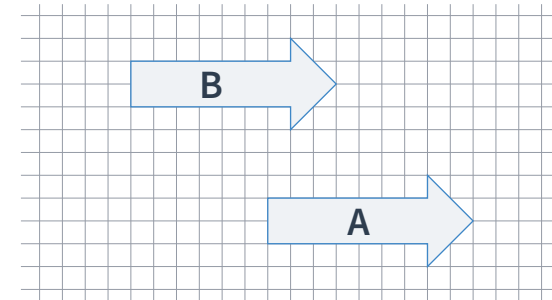
to the nearest 100: **94,500**

to the nearest 1,000: **95,000**

2 marks

Q3 These two arrows are identical.

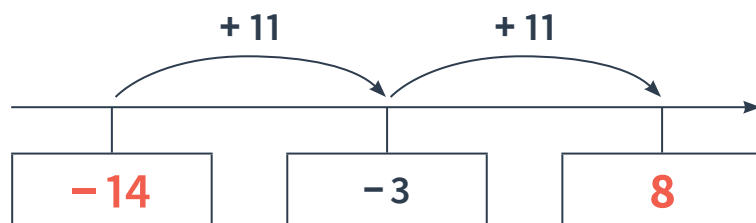Complete the boxes to describe the **translation** of arrow A to arrow B.

The arrow has moved **6** squares up and **6** squares to the left.

1 mark

THIRD SPACE LEARNING

© Third Space Learning 2018. You may photocopy this page.

Q1 Here is part of a number line.

Write the missing numbers in the boxes.

+ 11   + 11

| − 14 | | − 3 | | 8 |

2 marks

Q2 Ali puts these five numbers on a number line.

567,843 453,999 1,033,321 940,999 587,743

a Which number would be closest to 500,000?

453,999

1 mark

b Which number would be closest to one million?

1,033,321

1 mark

Q3 Circle the fractions below that are **not** equivalent to $\frac{6}{7}$.

$\frac{18}{21}$ $\frac{22}{28}$ $\frac{60}{70}$ $\frac{42}{35}$ $\frac{7}{14}$ $\frac{72}{84}$

2 marks

Q1 This is a weather report from the radio:

"The temperature in Dundee will average 3°C. The temperature in Glasgow will be 5°C lower than Dundee. The temperature in London will be 8°C higher than Glasgow."

a What will the temperature be in Glasgow today?

– 2°C

1 mark

b What will the temperature be in London today?

6°C

1 mark

Q2 Gracie and Evie each start with the same number.

Gracie rounds the number to the nearest hundred.

Evie rounds the number to the nearest ten.

Gracie's answer is double Evie's answer.

Explain how this could be.

See mark scheme for examples

1 mark

Q3 Class 6 gets through $\frac{3}{4}$ of a packet of glue sticks per table each year.

There are six tables in the class.

How many boxes of glue sticks does the class get through altogether?

Give your answer as a mixed number.

$$4 \frac{1}{2}$$

1 mark

	Requirement	Mark	Additional guidance
Q1a	−2°C	1	**Must include units for the award of the mark.**
Q1b	6°C	1	**Must include units for the award of the mark.** **If part a) is incorrect, also accept the answer to part a + 8.**
Q2	Accept any explanation that includes an example pair of numbers for which this would be true. For example **ACCEPT:** 53 to the nearest hundred is 100, and to the nearest ten is 50 and 2 × 50 = 100. If it's 50 or more but less than 55 it will round to 100 (nearest hundred) and 50 (nearest ten) and 100 is double 50. 51 rounds to 50 and 100.	1	**Do NOT accept incomplete or vague explanations, for example do NOT accept:** **They use 52.** **50 × 2 = 100.** **They could use between 50 and 55 which round to 100.**
Q3	Award **ONE** mark for the correct answer of: $4\frac{1}{2}$ or $4\frac{2}{4}$ (or any equivalent).	1	**Do NOT award any marks for a whole number followed by an improper fraction, e.g. do not award marks for $3\frac{6}{4}$.**

Q1 This table shows the height of the four tallest mountains in Europe.

Mountain name	Height in feet
Mount Elbrus	18,510
Mount Shkhara	17,064
Mont Blanc	15,774
Monte Rosa	15,203

How much higher are Mount Elbrus and Mount Shkhara **combined** than Mount Blanc and Mount Rosa **combined**?
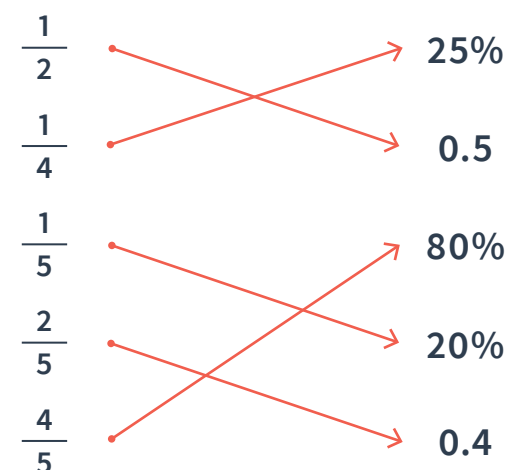
4,597 feet

2 marks

Q2 Complete this table.

Number	Rounded to the nearest thousand
5,843	**6,000**
874,732	**875,000**
699,847	**700,000**
43,743,743	**43,744,000**

2 marks

Q3 Draw lines to match the equivalent proportions.

$\frac{1}{2}$ 25%

$\frac{1}{4}$ 0.5

$\frac{1}{5}$ 80%

$\frac{2}{5}$ 20%

$\frac{4}{5}$ 0.4

2 marks

Q1 Vicky writes down three numbers:

506,606   650,660   566,600

Write down two things that are the same about these numbers and two things that are different.

Same:

See mark scheme for examples

Different:

See mark scheme for examples

1 mark

Q2 The difference between two whole numbers is four.

When each number is rounded to the nearest hundred, the difference between them is 100.

Write two possible values for the sets of numbers.

| 48 | and | 52 |
| 46 | and | 50 |

2 marks

Q3 Marley says " $\frac{3}{4}$ and $\frac{21}{28}$ are equivalent."

Explain why Marley is correct.

See mark scheme for examples

1 mark

	Requirement	Mark	Additional guidance
Q1	Accept any reasonable, accurate response. Most responses will refer to place value. Examples of correct responses are shown below: **Same:** All numbers have six digits. All numbers have a 6 in the hundreds place (worth 600). All the numbers are bigger than 500,000. All the numbers use the same digits. **Different:** The place value of the digits is different. The value of each number is different. Any place value-related observation e.g. 506,606 has a six in the ones column (worth 6) but the other two numbers don't.	1	When answering this question as a class, why not see how many different 'same' and 'different' facts you can come up with?

	Requirement	Mark	Additional guidance
Q2	Award **TWO** marks for any two pairs of correct numbers from the list below. 46 AND 50 47 AND 51 48 AND 52 49 AND 53 Award **ONE** mark for one pair of correct numbers, plus either no other pair given or one incorrect pair.	2	Accept duplication of the same pair for **ONE** mark.
Q3	Award **ONE** mark for an explanation that explains that they are equivalent as the numerator and denominator are linked by the same scale factor AND that identifies the scale factor. e.g. $3 \times 7 = 21$ $4 \times 7 = 28$ You can multiply 3 and 4 by 7 to get to $\frac{21}{28}$.	1	Do **NOT** accept vague answers or answers which do not identify the scale factor.