

Number and Place Value

Ready to Progress

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NPV	1NPV-1 Count within 100, forwards and backwards, starting with any number.		3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.	4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.	5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).
		2NPV-1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.	3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.	4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.	5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.	6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.
	1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =	2NPV-2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.	3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.	4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.	5NPV-3 Reason about the location of any number with up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts,

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NPV			3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.	4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.	5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.
					5NPV-5 Convert between units of measure, including using common decimals and fractions.	

Example Assessment Questions

Taken from DFE Maths Guidance 2020

Number and Place Value

1NPV-1

3NPV-1

4NPV-1

5NPV-1

6NPV-1

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<u>1NPV-1</u> Count within 100, forwards and backwards, starting with any number.		<u>3NPV-1</u> Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.	<u>4NPV-1</u> Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.	<u>5NPV-1</u> Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	<u>6NPV-1</u> Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000){
		→	→	→	

Year 1 – Number and Place Value

Ready to Progress Criterion:

NPV–1 Count within 100, forwards and backwards, starting with any number.

1NPV–1 Example assessment questions

1. Fill in the missing numbers.

	8	9		11	12
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37	38		40		42	43
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63	62		60		58	57
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Assessment guidance: To assess criterion **1NPV–1**, teachers must listen to each pupil count. This can be done through specifically planned tasks, or by carefully watching and listening to an individual pupil during daily counting as part of class routines.

Year 3 – Number and Place Value

Ready to Progress Criterion:

3NPV–1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.

3NPV–1 Example assessment questions

1. How many 10cm lengths can a 310cm length of ribbon be cut into?
2. The school office sells 52 poppies for 10p each. How much money have they collected altogether?
3. I take 10ml of medicine every day. How many days will a 250ml bottle last?
4. Marek is 2 years old, and has a mass of 10kg. His father's mass is 10 times as much. What is the mass of Marek's father?
5. Janey saves up £100. This is 10 times as much money as her brother has. How much money does her brother have?
6. Circle the numbers that are multiples of 10. Explain your answer.

640 300 105 510 330 409 100 864

Year 4 – Number and Place Value

Ready to Progress Criterion:

4NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100

4NPV–1 Example assessment questions

1. How many 100g servings of rice are there in a 2,500g bag?
2. One large desk costs a school £100. How much will 14 large desks cost?
3. My school field is 100m long. How many times do I have to run its length to run 3km?
4. My cup contains 100 ml of fizzy drink. The bottle contains 10 times as much. How many millilitres are there in the bottle?
5. A rhino mother weighs about 1,000kg. She weighs about 10 times as much as her baby. What is the approximate weight of the baby rhino?
6. Circle the lengths that could be made using 1 metre (100cm) sticks.
3,100cm 8,000cm 1,005cm 6,600cm 7,090cm 1,000cm

Year 5 – Number and Place Value

Ready to Progress Criterion:

5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.

5NPV–1 Example assessment questions

1. An apple weighs about 0.1kg. Approximately how many apples are there in a 1.8kg bag?
2. I have a 0.35m length of wooden rod. How many 0.01m lengths can I cut it into?
3. Mrs Jasper is juicing oranges. Each orange makes about 0.1 litres of juice. If Mrs Jasper juices 22 oranges, approximately how many litres of orange juice will she get?
4. Circle all of the numbers that are equal to a whole number of tenths.

0.2

4.8

1

0.01

10

0.83

5. Fill in the missing numbers.

$$0.01 \times \boxed{} = 1$$

$$0.1 \times \boxed{} = 1$$

$$0.01 \times \boxed{} = 0.1$$

6. Fill in the missing numbers.

$$\boxed{} \text{ tenths} = 3.9$$

$$\boxed{} \text{ hundredths} = 0.22$$

$$\boxed{} \text{ hundredths} = 8$$

7. Match the numbers on the left with the equivalent fractions on the right.

0.20

$\frac{2}{100}$

0.02

$\frac{21}{100}$

0.12

$\frac{2}{10}$

0.21

$\frac{12}{100}$

Year 6 – Number and Place Value

Ready to Progress Criterion:

6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).

6NPV–1 Example assessment questions

- Complete the sentences.
 - 500 made 1,000 times the size is _____.
 - 0.7 made 100 times the size is _____.
 - 800,000 made 10 times the size is _____.
 - 4,000,000 made one-thousandth times the size is _____.
 - 9,000 made one-hundredth times the size is _____.
 - 3 made one-tenth times the size is _____.
- The distance from London to Bristol is about 170km. The distance from London to Sydney, Australia is about 100 times as far. Approximately how far is it from London to Sydney?
- A newborn elephant weighs about 150kg. A newborn kitten weighs about 150g. How many times the mass of a newborn kitten is a newborn elephant?
- Walid has a place-value chart and three counters. He has represented the number 1,110,000.

Millions			Thousands			Ones		
100s	10s	1s	100s	10s	1s	100s	10s	1s
								

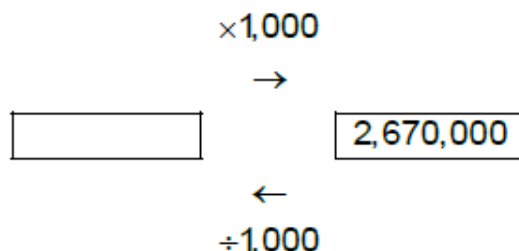
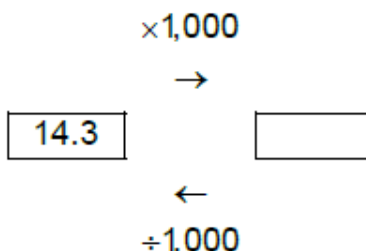
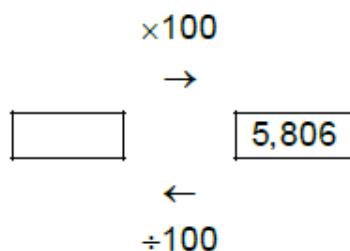
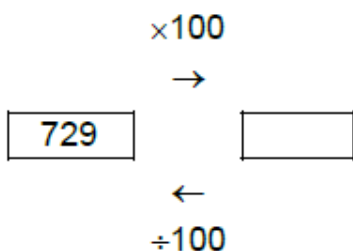
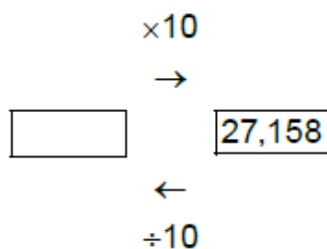
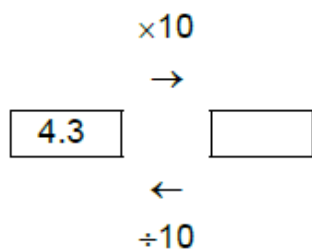
- Find 2 different numbers that Walid could make so that 1 number is one-hundredth times the size of the other number.
- Find 2 different numbers that Walid could make so that 1 number is 1,000 times the size of the other number.

Year 6 – Number and Place Value (continued)

Ready to Progress Criterion:

6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).

5. Fill in the missing numbers.



6. Use the following to complete the equations:

$\times 10$

$\times 100$

$\times 1,000$

$\div 10$

$\div 100$

$\div 1,000$

Use each term only once.

$543 \boxed{} = 5.43$

$3,169 \boxed{} = 3,169,000$

$515 \boxed{} = 5,150$

$276,104 \boxed{} = 27,610.4$

$35,000 \boxed{} = 35$

$427 \boxed{} = 42,700$

Number and Place Value

2NPV-1

3NPV-2

4NPV-2

5NPV-2

6NPV-2

2NPV-1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.

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3NPV-2 Recognise the place value of each digit in *three*-digit numbers, and compose and decompose *three*-digit numbers using standard and non-standard partitioning.

→

4NPV-2 Recognise the place value of each digit in *four*-digit numbers, and compose and decompose *four*-digit numbers using standard and non-standard partitioning.

→

5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.

→

6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.

Year 2 – Number and Place Value

Ready to Progress Criterion:

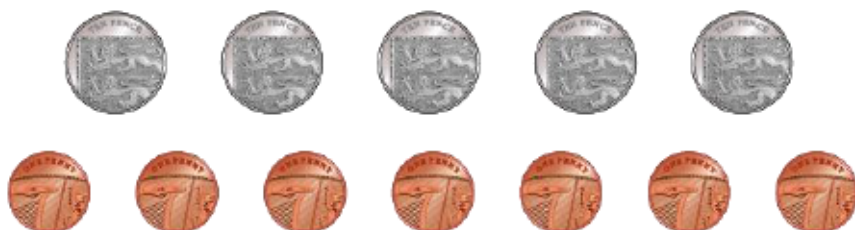
2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.

2NPV–1 Example assessment questions

1. Daisy has used 10cm rods and 1cm cubes to measure the length of this toy boat. How long is the boat?



2. What is the total value of these coins?



3. Monika watches a cartoon for 20 minutes and a news programme for 5 minutes. How long does she watch television for?
4. Fill in the missing numbers.
 $47 - \square = 7$ $\square = 8 + 60$
5. Jed collects 38 conkers and gives 8 of them to Dylan. How many conkers does Jed have left?

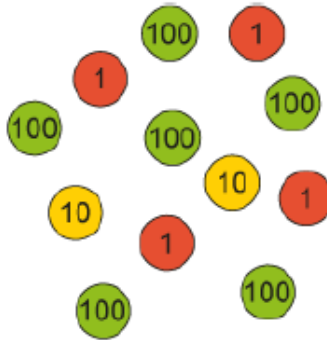
Year 3 – Number and Place Value

Ready to Progress Criterion:

3NPV–2 Recognise the place value of each digit in *three*-digit numbers, and compose and decompose *three*-digit numbers using standard and non-standard partitioning.

3NPV–2 Example assessment questions

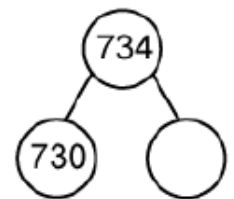
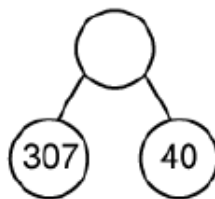
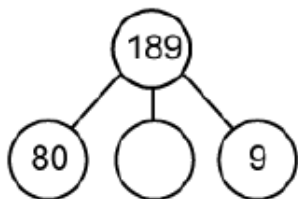
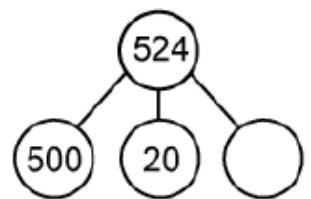
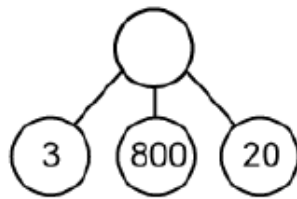
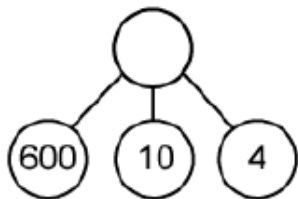
1. What number is represented by these counters?



2. What number is represented by this expression?

$$1 + 10 + 10 + 100 + 100 + 10 + 10$$

3. Fill in the missing numbers to complete these partitioning diagrams.



Year 3 – Number and Place Value (continued)

Ready to Progress Criterion:

3NPV–2 Recognise the place value of each digit in *three*-digit numbers, and compose and decompose *three*-digit numbers using standard and non-standard partitioning.

4. Fill in the missing numbers.

$$600 + 70 + 1 = \square$$

$$3 + 500 + 40 = \square$$

$$461 = \square + 60 + 1$$

$$20 + \square + 3 = 823$$

$$953 - 50 - 3 = \square$$

$$846 - \square - 40 = 800$$

$$\square = 203 + 90$$

$$\square = 290 + 3$$

$$628 = 20 + \square$$

$$628 = 8 + \square$$

5. Fill in the missing symbols (<, > or =).

$$100 + 60 + 5 \bigcirc 105 + 60$$

$$300 + 40 + 2 \bigcirc 300 + 24$$

$$783 - 80 \bigcirc 783 - 3$$

$$839 - 9 - 30 \bigcirc 839 - 39$$

6. There are 365 days in a year. If it rains on 65 days of the year, on how many days does it not rain?

7. A bamboo plant was 4m tall. Then it grew by another 83cm. How tall is the bamboo plant now? Express your answer in centimetres.

8. In the school library there are 25 books on the trolley and 250 books on the shelves. How many books are there altogether?

9. Francesco had 165 marbles. Then he gave 45 marbles to his friend. How many marbles does Francesco have now?

10. The tree outside Cecily's house is 308cm tall. How much further would it have to grow to reach the bottom of Cecily's bedroom window, at 3m 68cm?

Year 4 – Number and Place Value

Ready to Progress Criterion:

4NPV–2 Recognise the place value of each digit in *four*-digit numbers, and compose and decompose *four*-digit numbers using standard and non-standard partitioning.

4NPV–2 Example assessment questions

1. Complete the calculations.

$$90 + 7 + 6,000 + 400 = \boxed{}$$

$$4,382 - 300 = \boxed{}$$

$$900 + 70 + 600 + 4 = \boxed{}$$

$$4,382 - 80 = \boxed{}$$

$$9 + 7,000 + 60 + 400 = \boxed{}$$

$$4,382 - 2 = \boxed{}$$

$$9,000 + 700 + 6 + 40 = \boxed{}$$

$$4,382 - 4,000 = \boxed{}$$

$$8,451 = 5,000 + \boxed{}$$

$$300 + 5,614 = \boxed{}$$

$$9,575 - 50 = \boxed{}$$

$$6,140 = 5,000 + \boxed{} + 40$$

$$2,000 + 1,430 + 50 = \boxed{}$$

2. A football stadium can hold 6,430 people. So far 4,000 tickets have been sold for a match. How many tickets are left?
3. On a field trip, the children need to walk 4,200m. So far they have walked 3km. How much further do they have to walk?
4. Mr. Davis has 2 cats. One cat weighs 4,200g. The other cat weighs 3,050g. Their basket weighs 2kg. How much does the basket weigh with both cats inside it?

Year 5 – Number and Place Value

Ready to Progress Criterion:

5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.

5NPV–2 Example assessment questions

1. Complete the calculations.

$$4 + 0.07 + 0.2 = \square$$

$$0.4 + 0.02 + 70 = \square$$

$$20 + 0.07 + 4 = \square$$

$$0.4 + 20 + 700 = \square$$

2. Circle the numbers that add together to give a total of 0.14

0.04

0.12

0.1

0.2

3. Fill in the missing numbers.

$$3.87 - 0.8 = \square$$

$$25.14 - 0.04 = \square$$

$$19.7 - 9 = \square$$

$$99.99 - 90 = \square$$

$$84.51 = 50 + \square$$

$$0.3 + 5.61 = \square$$

$$95.75 - 0.5 = \square$$

$$6.14 = 5 + \square + 0.04$$

$$2 + 1.43 + 0.05 = \square$$

4. I have 3.7kg of modelling clay. If we use 2kg, how much will be left?
5. I will use 0.65 litres of milk for one recipe, and 0.23 litres of milk for another. How much milk will I use altogether?
6. Ilaria jumped 3.19m in a long jump competition. Emma jumped 3.12m. How much further did Ilaria jump than Emma?
7. Maya cycled 7.3km to get to her friend's house, and then cycled a further 0.6km to the park. How far did Maya cycle altogether?

Year 6 – Number and Place Value

Ready to Progress Criterion:

6NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.

6NPV–2 Example assessment questions

1. What is the value of the digit 5 in each of these numbers?
 - a. 720,541
 - b. 5,876,023
 - c. 1,587,900
 - d. 651,920
 - e. 905,389
 - f. 2,120,806.50
 - g. 8,002,345
 - h. 701,003.15
2. Write a seven-digit number that includes the digit 8 once, where the digit has a value of:
 - a. 8 million
 - b. 8 thousand
 - c. 8 hundred
 - d. 80 thousand
3. Fill in the missing symbols (< or >).

7,142,294 ○ 7,124,294	99,000 ○ 600,000
6,090,100 ○ 690,100	1,300,610 ○ 140,017
589,940 ○ 1,010,222	
4. Put these numbers in order from smallest to largest.

8,102,304	8,021,403	843,021	8,043,021
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Number and Place Value

1NPV-2

2NPV-2

3NPV-3

4NPV-3

5NPV-3

6NPV-3

<u>1NPV-2</u> Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = →	<u>2NPV-2</u> Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. →	<u>3NPV-3</u> Reason about the location of any <i>three</i> -digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. →	<u>4NPV-3</u> Reason about the location of any <i>four</i> -digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each. →	<u>5NPV-3</u> Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. →	<u>6NPV-3</u> Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. →
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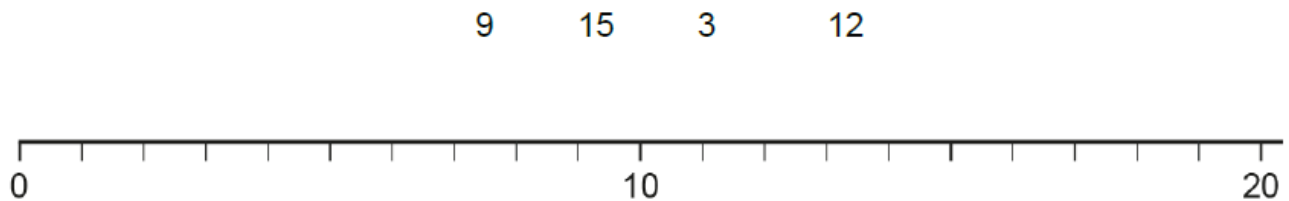
Year 1 – Number and Place Value

Ready to Progress Criterion:

1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$

1NPV–2 Example assessment questions

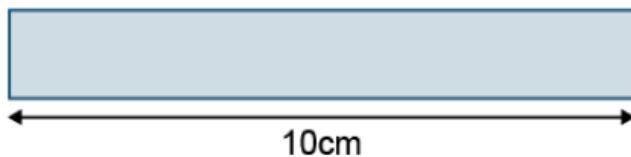
1. Label these numbers on the number line.



2. Estimate the value of the missing numbers.



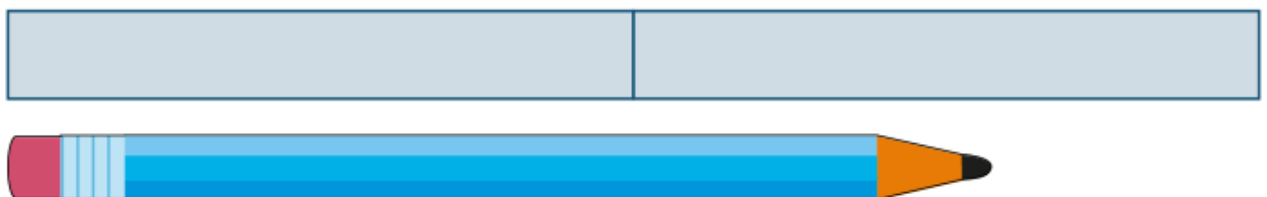
3. Mahmood is using 10cm paper strips to measure things in the classroom.



- a. How long do you think the eraser is?



- b. How long do you think the pencil is?



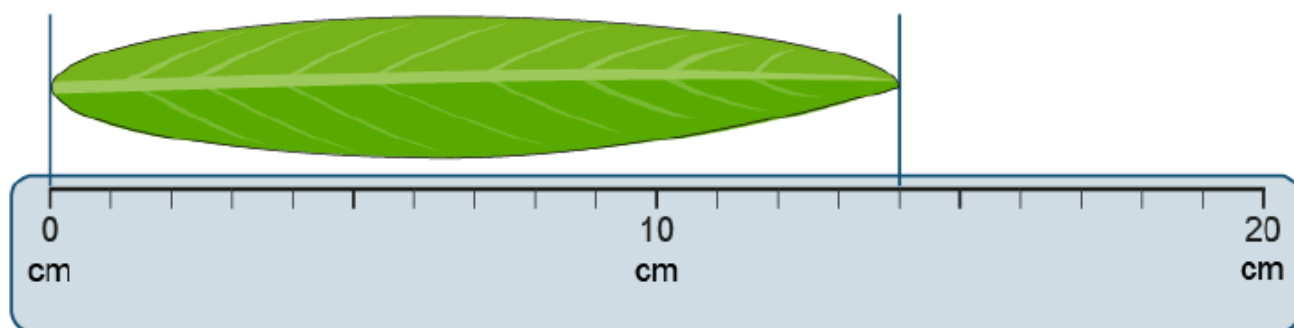
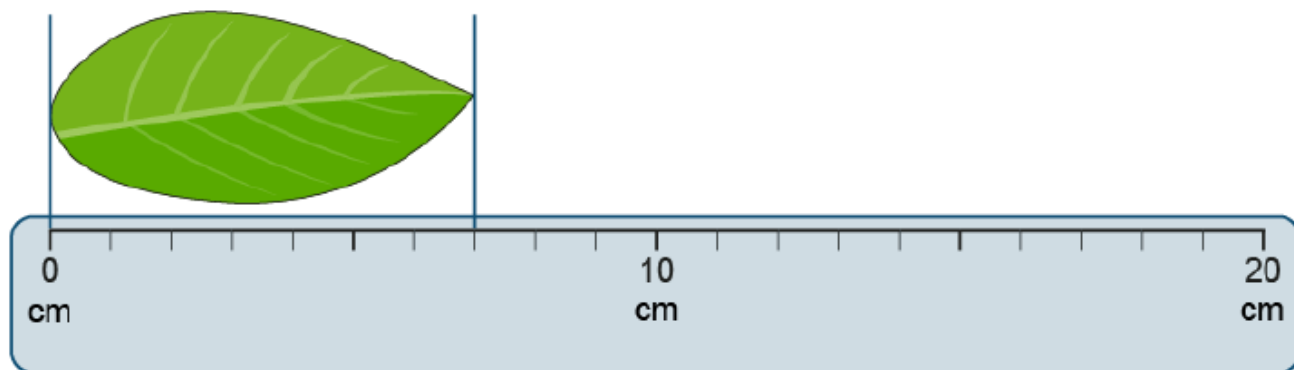
Images drawn to scale

Year 1 – Number and Place Value (Continued)

Ready to Progress Criterion:

1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$

4. Mia measures 2 different leaves with a ruler. How long is each leaf?



Images drawn to scale

Assessment guidance: The example questions above can be set as a written task. However, teachers will need to watch pupils closely to assess whether pupils are developing efficient strategies and appropriate proportional reasoning skills. Teachers should assess pupils in small groups.

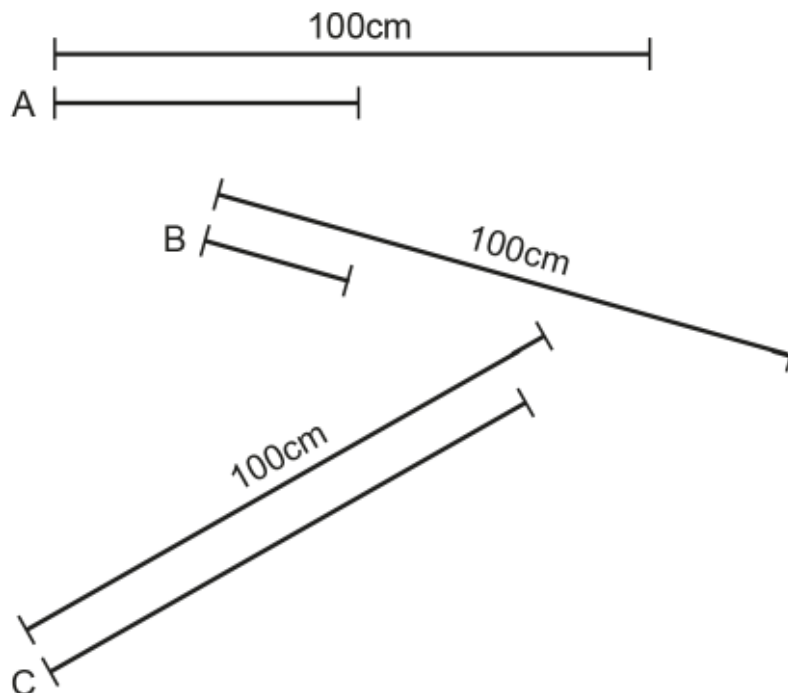
Year 2 – Number and Place Value

Ready to Progress Criterion:

2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.

2NPV–2 Example assessment questions

1. Look at lines A, B and C. Estimate how long they are by comparing them to the 100cm lines?



2. The table shows the results of a survey which asked pupils to choose their favourite sport. Which sports were chosen by between 20 and 30 pupils?

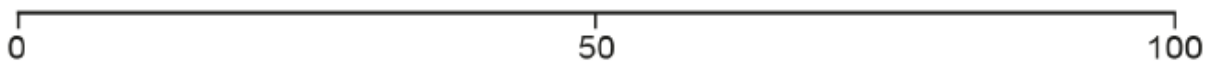
Favourite sport	Number of pupils
netball	24
basketball	19
tennis	12
football	32
hockey	6
swimming	28
gymnastics	15

Year 2 – Number and Place Value (Continued)

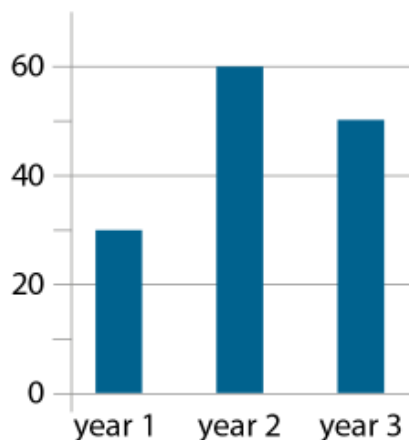
Ready to Progress Criterion:

2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.

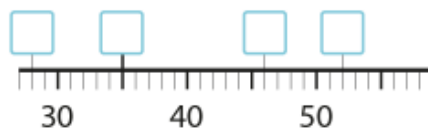
3. Sophie thinks of a number. She says, “My number is between 40 and 50. It has 7 in the ones place.” What is Sophie’s number?
4. Estimate the position of 60 on this number line:



5. The bar chart shows the number of pupils in each year-group in a school. How many pupils are in year 1?



6. Fill in the missing numbers.



Year 3 – Number and Place Value

Ready to Progress Criterion:

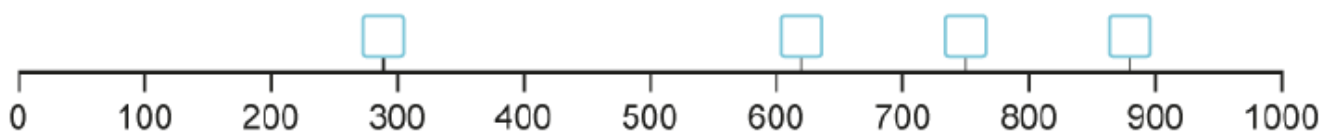
3NPV–3 Reason about the location of any *three*-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.

3NPV–3 Example assessment questions

1. Fill in the missing numbers.

900		700	600		400		200
370		390			420		440

2. Estimate to fill in the missing numbers.



3. Estimate and mark the position of these numbers on the number line.

600 200 480 840 762 195



Year 3 – Number and Place Value (Continued)

Ready to Progress Criterion:

3NPV–3 Reason about the location of any *three*-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.

4. Fill in the missing numbers.

100
less
 ← 800 →
100
more

10
less
 ← 390 →
10
more

100
less
 ← 100 →
100
more

10
less
 ← 800 →
10
more

previous
multiple
of 100
 ← 630 →
next
multiple
of 100

previous
multiple
of 100
 ← 347 →
next
multiple
of 100

previous
multiple
of 10
 ← 492 →
next
multiple
of 10

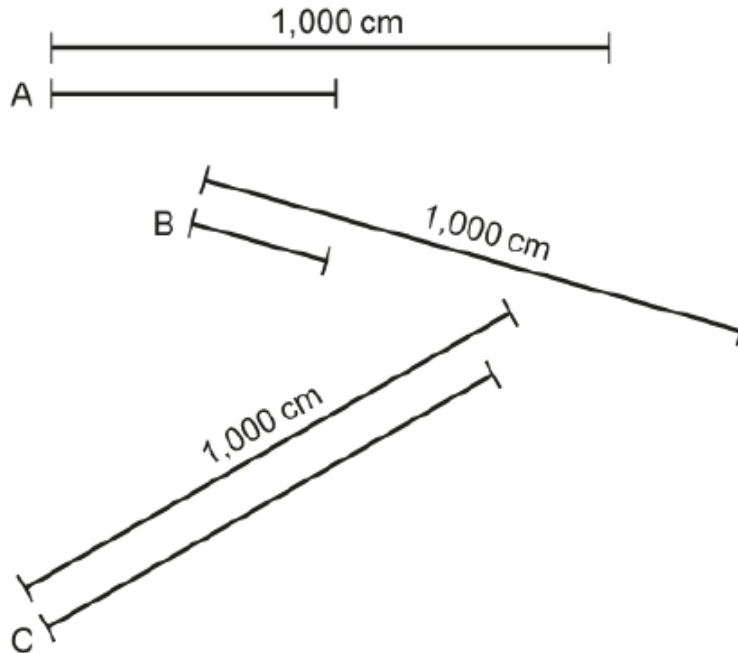
previous
multiple
of 10
 ← 347 →
next
multiple
of 10

Year 3 – Number and Place Value (Continued again)

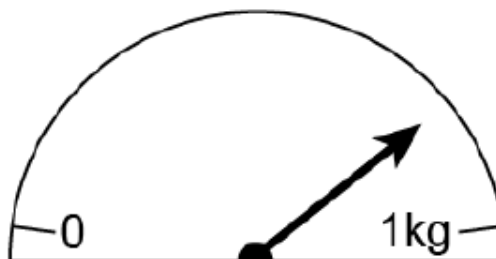
Ready to Progress Criterion:

3NPV–3 Reason about the location of any *three*-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.

5. Look at lines A, B and C. Can you estimate how long they are by comparing them to the 1,000cm lines?



6. Estimate the mass, in grams, shown on this weighing scale.



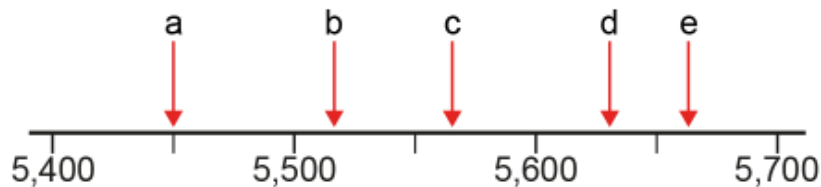
Year 4 – Number and Place Value

Ready to Progress Criterion:

4NPV–3 Reason about the location of any *four*-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.

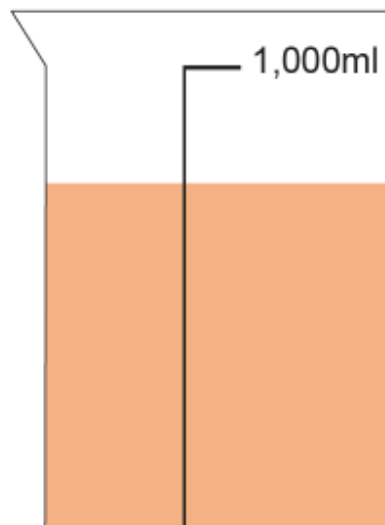
4NPV–3 Example assessment questions

1.



- Which 2 numbers round to 5,600 when rounded to the nearest hundred?
- Round each number to the nearest thousand.
- Estimate the value of each number.

2.



- Estimate how much liquid is in the beaker.
- Estimate how much liquid needs to be added to make 1 litre.

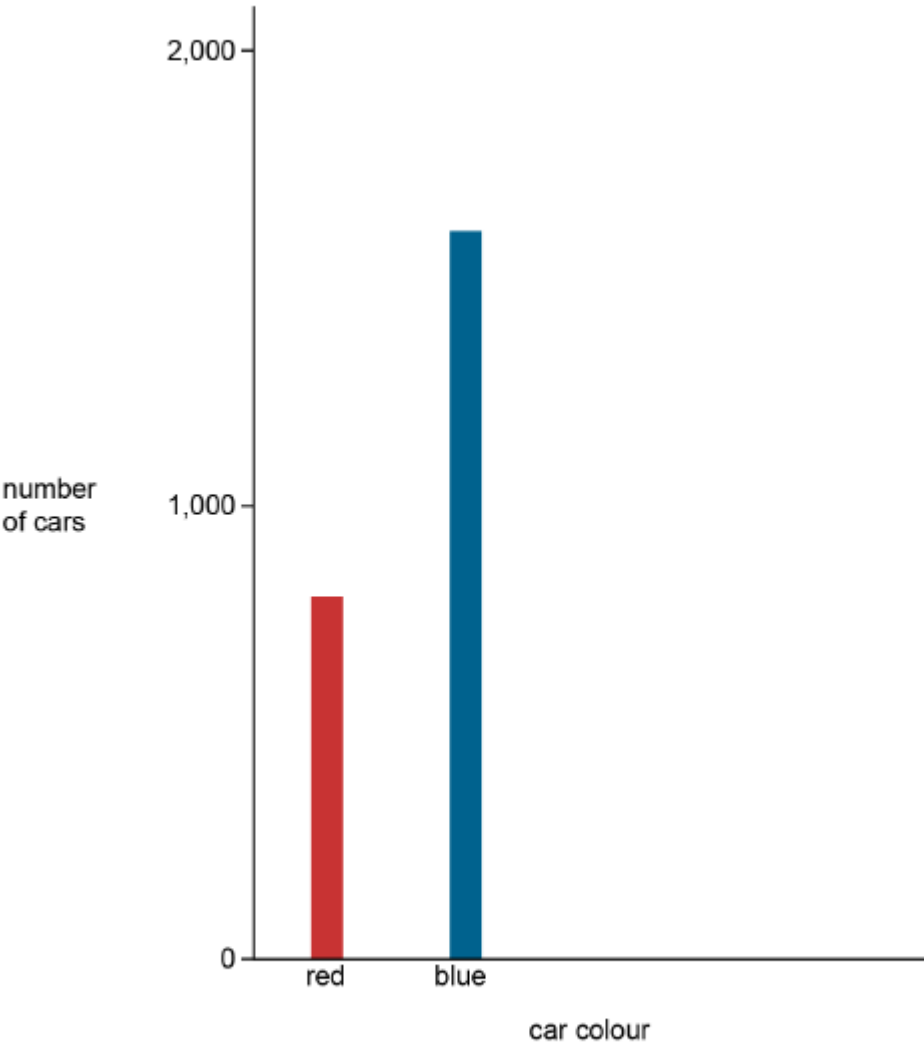
3. Estimate and mark the position of 600g on this scale.



Year 4 – Number and Place Value (Continued)

Ready to Progress Criterion:
4NPV–3 Reason about the location of any *four*-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.

4. The bar chart shows the number of red and blue cars that passed a school in one day.



- a. Estimate the number of red and blue cars that passed the school on this day.
- b. Estimate the number of blue cars that passed the school on this day.
- c. Add the following data for other coloured cars to the bar chart.

	Yellow	Black	White
Number of cars	100	1,050	1,995

Year 4 – Number and Place Value (Continued again)

Ready to Progress Criterion:

4NPV–3 Reason about the location of any *four*-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.

5. Fill in the missing numbers.

600	700		900		1,100		1,300
-----	-----	--	-----	--	-------	--	-------

			5,001	5,002	5,003	
--	--	--	-------	-------	-------	--

3,650			3,950			4,250	4,350
-------	--	--	-------	--	--	-------	-------

1,075	1,085	1,095		
-------	-------	-------	--	--

Year 5 – Number and Place Value

Ready to Progress Criterion:

5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.

5NPV–3 Example assessment questions

1. Place each of these numbers on the number line.

0.6 0.16 0.91 0.09 0.69



2. The table shows how far some children jumped in a long-jump competition.

Name	Distance jumped (m)
Jamal	3.04
Reyna	3.4
Faisal	2.85
Ilaria	3.19
Charlie	3.09
Kagendo	2.9

- a. Who jumped the furthest and won the competition?
- b. Who came third in the competition?
- c. How much further did Kagendo jump than Faisal?
- d. How much further did Ilaria jump than Charlie?
3. Fill in the missing symbols (<, > or =).

$0.3 \bigcirc 0.5$

$0.03 \bigcirc 0.05$

$0.50 \bigcirc 0.5$

$9 \bigcirc 9.00$

$0.2 \bigcirc 0.15$

$0.11 \bigcirc 0.09$

$1.01 \bigcirc 1.1$

$3 \bigcirc 2.99$

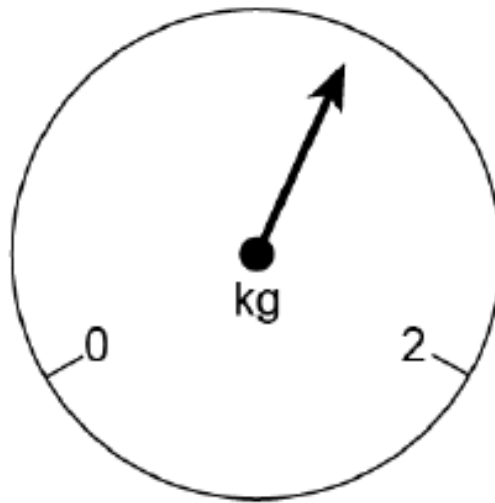
$140 \bigcirc 1.40$

Year 5 – Number and Place Value (Continued)

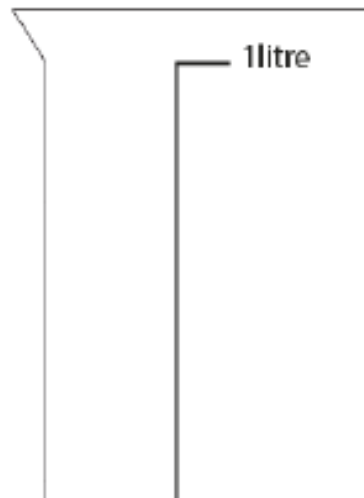
Ready to Progress Criterion:

5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.

4. Here is a weighing scale. Estimate the mass in kilograms that the arrow is pointing to.



5. Estimate and mark the position of 0.7 litres on this beaker.



Year 5 – Number and Place Value (Continued again)

Ready to Progress Criterion:

5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.

6. Fill in the missing numbers.

			5.01	5.02	5.03		
3.65			3.95			4.25	4.35
			27.9	27.8	27.7		

7. A farmer weighed each of 6 new-born lambs. Round the mass of each lamb to the nearest whole kilogram.

	Rounded to nearest whole kilogram
5.19kg	
6.7kg	
4.08kg	
6.1kg	
6.45kg	
4.91kg	

8. I need 4.25 metres of ribbon.

- How much is this to the nearest tenth of a metre?
- How much is this to the nearest metre?
- If ribbon is sold only in whole metres, how many metres do I need to buy?

Year 6 – Number and Place Value

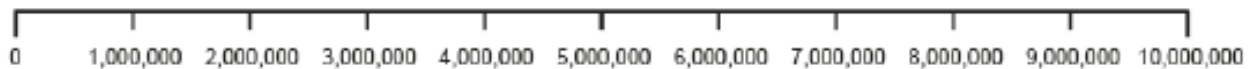
Ready to Progress Criterion:

6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.

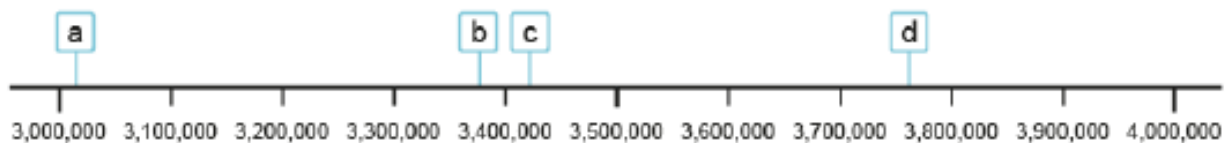
6NPV–3 Example assessment questions

1. Show roughly where each of these numbers is located on the number line below.

2,783,450 7,000,500 5,250,000 8,192,092 99,000



2. Estimate the values of a, b, c and d.



3. For each number:

- write the previous and next multiple of 1 million
- circle the previous or next multiple of 1 million which is closest to the number

previous
multiple of
1,000,000

next
multiple of
1,000,000

< 2,783,450 <

< 5,192,012 <

< 5,811,159 <

< 7,683,102 <

Year 6 – Number and Place Value (Continued)

Ready to Progress Criterion:

6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.

4. Fill in the missing numbers.

6,361,040	6,371,040	6,381,040	6,391,040	6,401,040	6,411,040		
-----------	-----------	-----------	-----------	-----------	-----------	--	--

2,004,567	2,003,567	2,002,567	2,001,567	2,000,567	1,999,567		
-----------	-----------	-----------	-----------	-----------	-----------	--	--

7,730,004		7,930,004	8,030,004		8,230,004		8,430,004
-----------	--	-----------	-----------	--	-----------	--	-----------

	9,149,301		9,129,301	9,119,301			9,089,301
--	-----------	--	-----------	-----------	--	--	-----------

5. What might the missing number be in this web page?

Astro Times

Home	History	Star Maps	Contact
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The Earth's circumference is estimated to be around km. Calculations have shown the distance all around the equator to measure 40,075km.

6. A swimming pool holds approximately 82,000 litres of water. The capacity of the swimming pool has been rounded to the nearest multiple of 1,000. Fill in the missing numbers to complete the sentences.

- The minimum amount of water that the pool could hold is _____.
- The maximum amount of water that the pool could hold is _____.

Number and Place Value

3NPV-4

4NPV-4

5NPV-4

6NPV-4

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<u>3NPV-4</u> Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. →	<u>4NPV-4</u> Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts. →	<u>5NPV-4</u> Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. →	<u>6NPV-4</u> Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

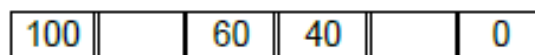
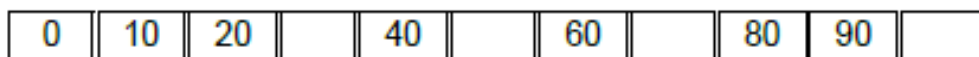
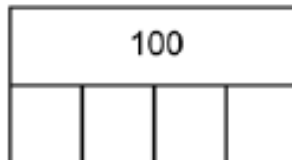
Year 3 – Number and Place Value

Ready to Progress Criterion:

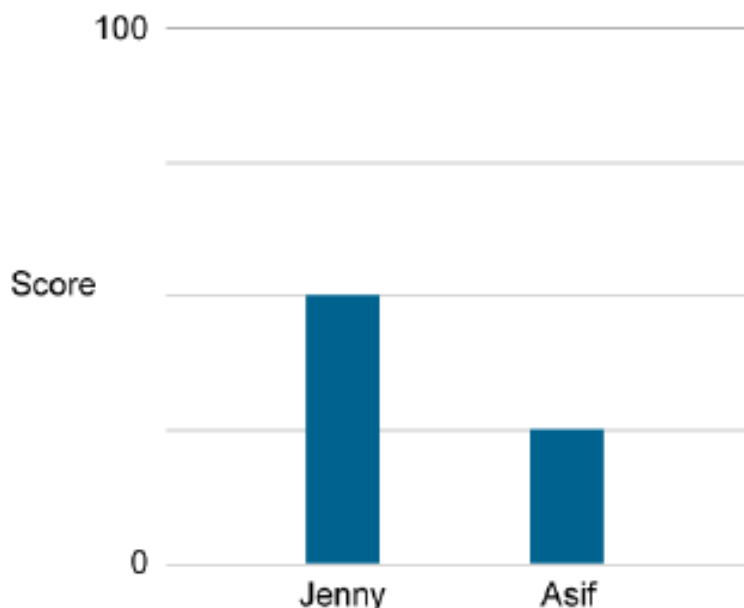
3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.

3NPV–4 Example assessment questions

1. Fill in the missing numbers.



2. What were Jenny and Asif's scores?

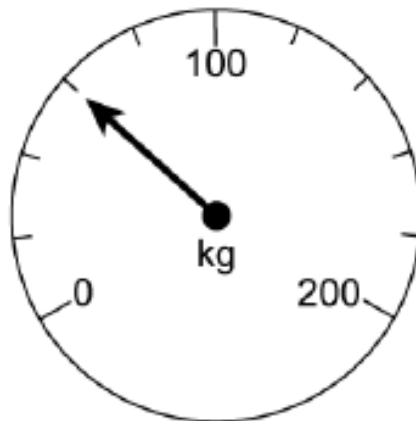


Year 3 – Number and Place Value (Continued)

Ready to Progress Criterion:

3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.

3. Miss Scot weighs herself. How much does she weigh, in kilograms?



4. How many centimetres long is the ribbon?



5. How many 25p cupcakes can I buy for £5?
6. How many 50cm lengths of wood can I cut from a 3m plank?
7. We raise £100 at the school fair and divide the money equally between 5 charities. How much does each charity get?
8. Fill in the missing numbers.

$$100 \div 4 = \square$$

$$\square \times 20 = 100$$

$$100 \div 50 = \square$$

$$25 + \square = 100$$

9. Stan counts from 0 in multiples of 25. Circle the numbers he will say.

100

25

240

155

400

275

505

350

Year 4 – Number and Place Value

Ready to Progress Criterion:

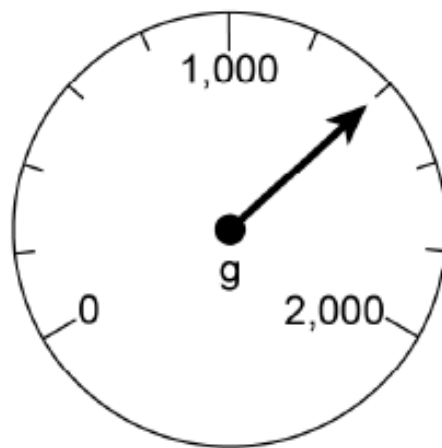
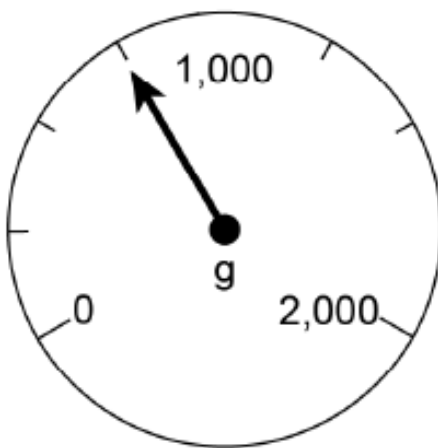
4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.

4NPV-4 Example assessment questions

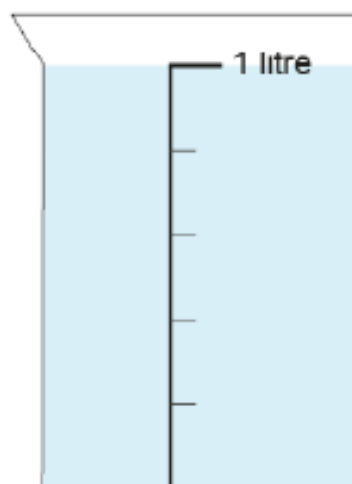
1. Fill in the missing numbers.

3,000		4,000	4,500	5,000	
	2,400			3,000	3,200
1,500		2,000			2,750

2. What is the reading on each of these scales?



3. The beaker contains 1 litre of water.



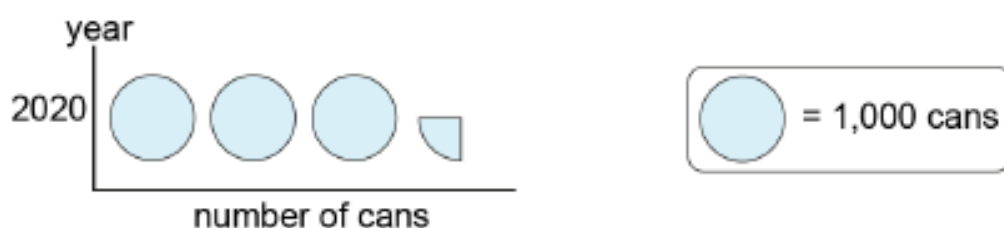
If I pour out 600ml, how much is left? Mark the new water level on the picture.

Year 4 – Number and Place Value (Continued)

Ready to Progress Criterion:

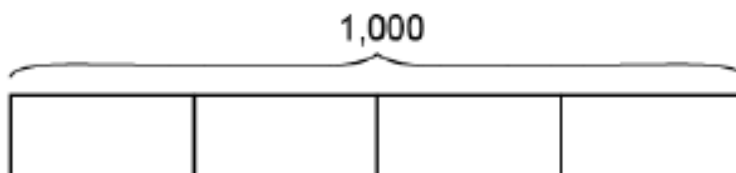
4NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.

4. A motorway repair team can build 250m of motorway barrier in 1 day. In 5 working days, how many metres of motorway barrier can they build?
5. How many 500ml bottles can I fill from a 3 litre container of water?
6. The pictogram shows how many cans a class recycled in 2020.



How many cans did the class recycle in 2020?

7. 1kg of strawberries is shared equally between 5 people. How many grams of strawberries do they each get?
8. I have already swum 750m. How much further do I need to go to swim 2km?
9. Fill in the missing parts, and write as many different equations as you can think of to describe the structure.

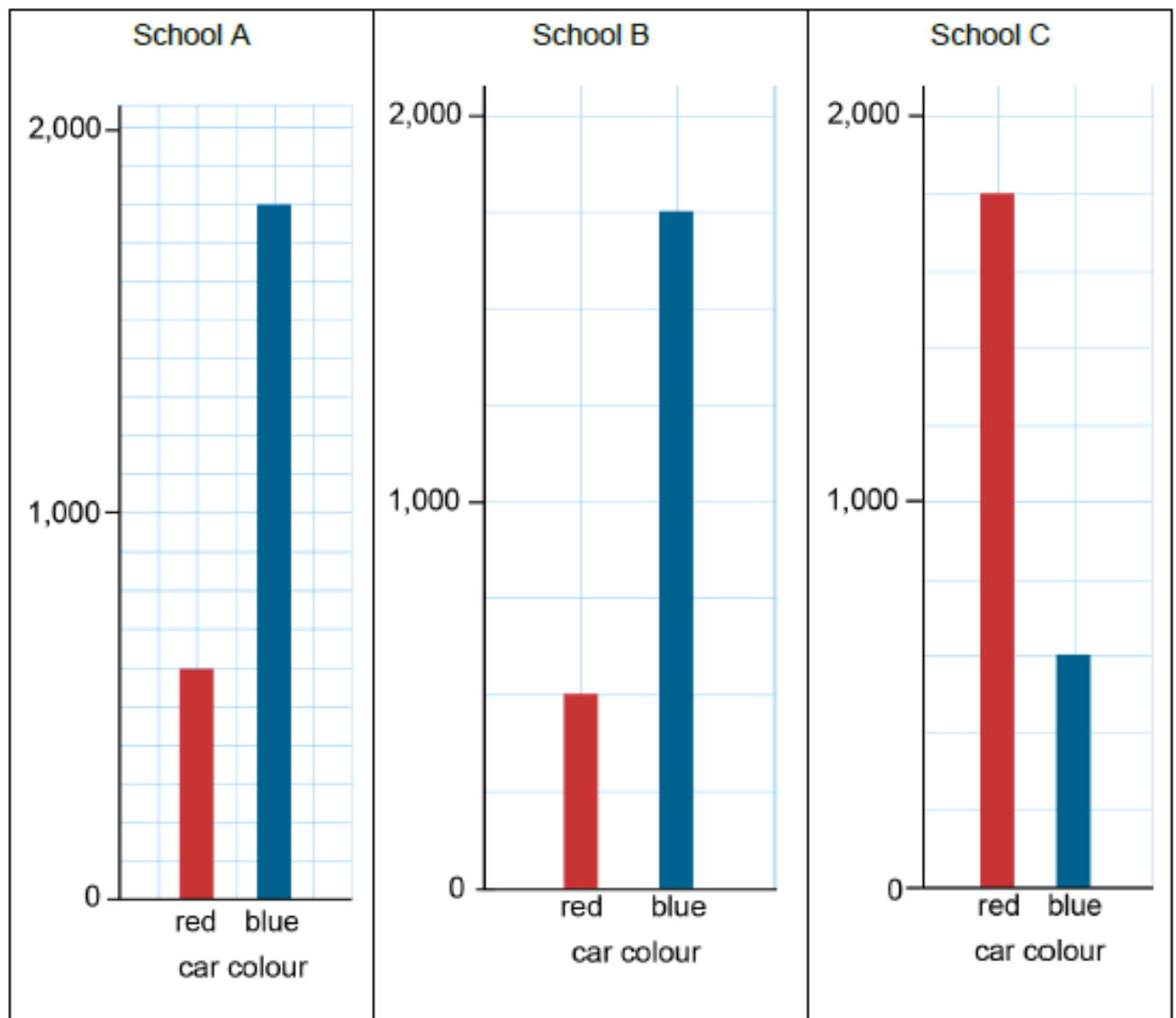


Year 4 – Number and Place Value (Continued again)

Ready to Progress Criterion:

4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.

10. The bar charts show the number of red and blue cars that passed 3 different schools on a given day. How many red and blue cars passed each school?



11. Fill in the missing numbers.

$$1,000 \div 4 = \boxed{}$$

$$\boxed{} \times 200 = 1,000$$

$$1,000 \div 500 = \boxed{}$$

$$250 + \boxed{} = 1,000$$

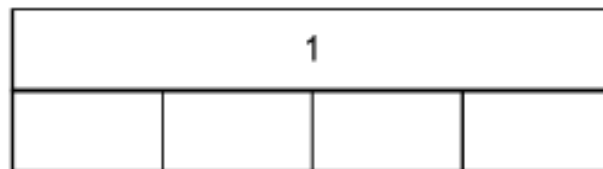
Year 5 – Number and Place Value

Ready to Progress Criterion:

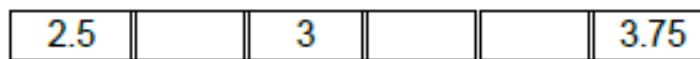
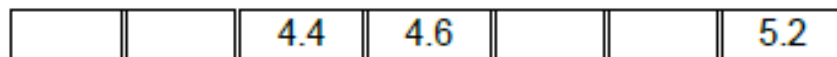
5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.

5NPV–4 Example assessment questions

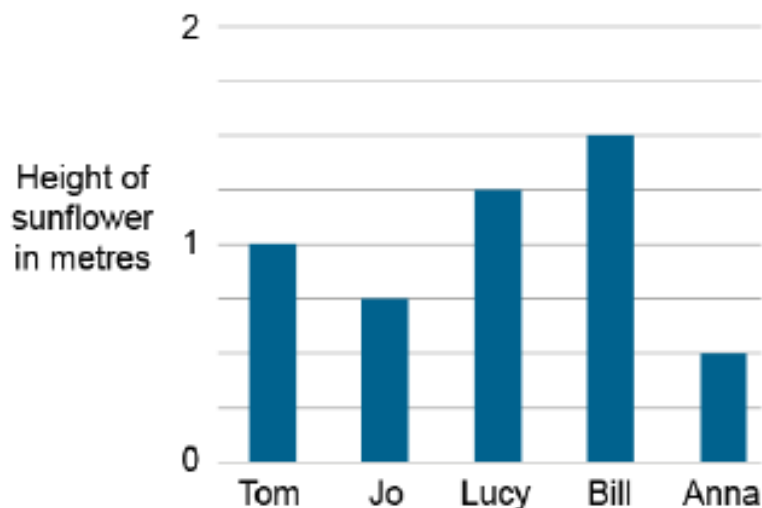
1. Fill in the missing parts, and write as many different equations as you can think of to represent the bar model.



2. Fill in the missing numbers.



3. 5 children have been growing sunflowers. The bar chart shows how tall each child's sunflower has grown. How tall is each flower?

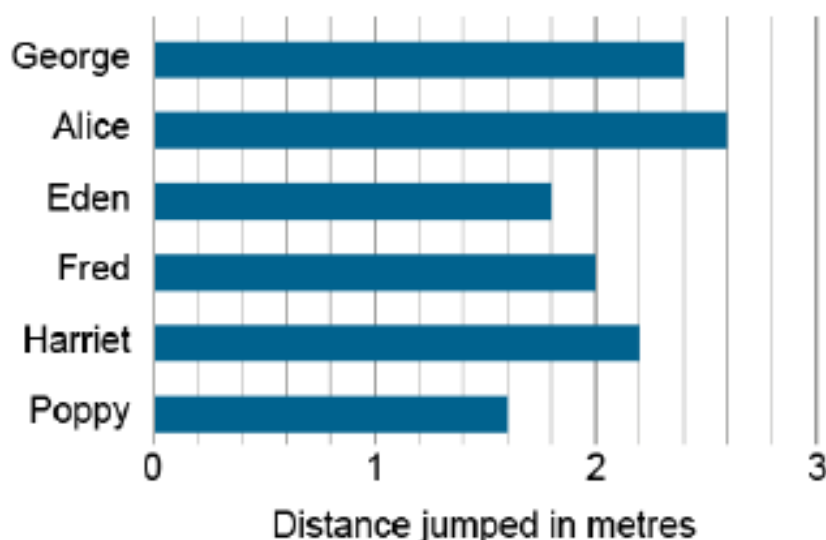


Year 5 – Number and Place Value (Continued)

Ready to Progress Criterion:

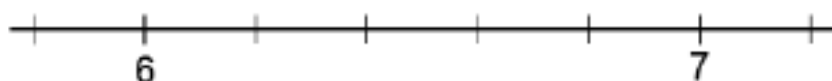
5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.

4. The bar chart below shows long-jump distances for 6 children.



- How far did the winning child jump?
- What was the difference between the two longest jumps?

5. Complete the labelling of these scales.

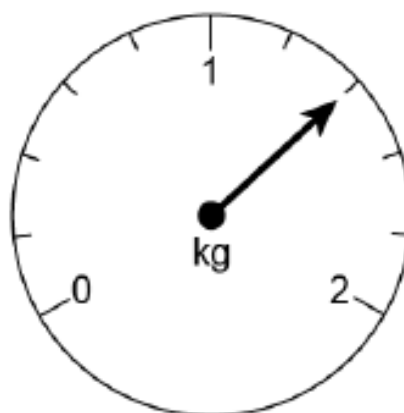
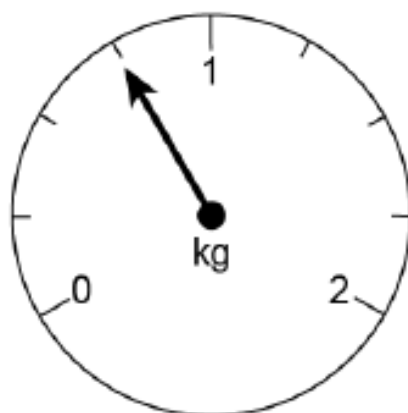


Year 5 – Number and Place Value (Continued again)

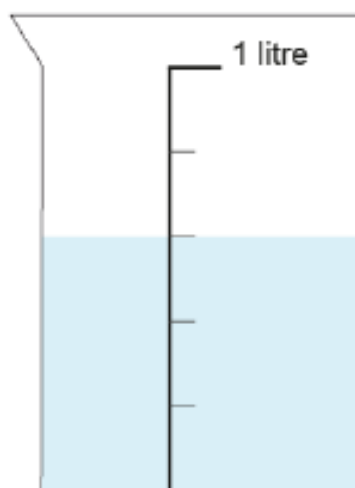
Ready to Progress Criterion:

5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.

6. What is the reading on each of these scales, in kilograms?



7. Here is a 1 litre beaker with some liquid in. How much more liquid, in litres, do I need to add to the beaker to make 1 litre?



8. A motorway repair team can build 0.2km of motorway barrier in 1 day. In 6 working days, how many kilometres of motorway barrier can they build?

9. How many 0.25 litre servings of orange juice are there in a 2 litre carton?

10. 0.25m of ribbon costs £1. How much does 2m of ribbon cost?

11. Fill in the missing numbers.

$$1 - 0.2 = \square$$

$$5 \times \square \text{ m} = 1 \text{ m}$$

$$1 \div 5 = \square$$

$$1 - 0.8 = \square$$

$$4 \times \square \text{ m} = 1 \text{ m}$$

$$1 \div 5 = 1 - \square$$

$$1 - \square = 1 - 0.2 - 0.2$$

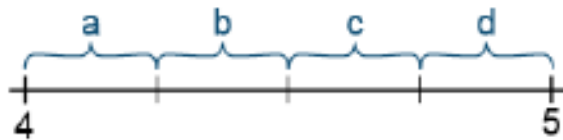
$$5 \times 0.2 \text{ m} = 4 \times \square \text{ m}$$

Year 5 – Number and Place Value (Continued again)

Ready to Progress Criterion:

5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.

12. Here is a part of a number line divided into 4 equal parts.



In which section (a, b, c or d) does each of these numbers belong? Explain your answers.

4.3

4.03

4.09

4.76

4.41

4.69

Year 6 – Number and Place Value

Ready to Progress Criterion:

6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

6NPV–4 Example assessment questions

1. If $\frac{1}{10}$ of a 1kg bag of flour is used, how much is left?
2. In 2005, the population of Birmingham was about 1 million. At that time, about $\frac{1}{5}$ of the population was over 60 years old. Approximately how many over-60s lived in Birmingham in 2005?
3. A builder ordered 1,000kg of sand. She has about 300kg left. What fraction of the total amount is left?
4. Fill in the missing parts.

10,000,000			

1,000									

250,000	250,000	250,000	250,000

1			

1,000,000				

0.5		0.5	

Year 6 – Number and Place Value (Continued)

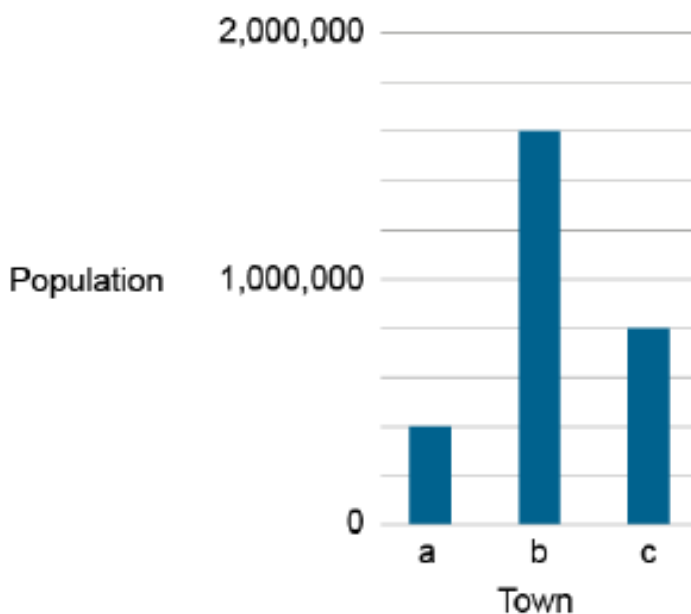
Ready to Progress Criterion:

6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

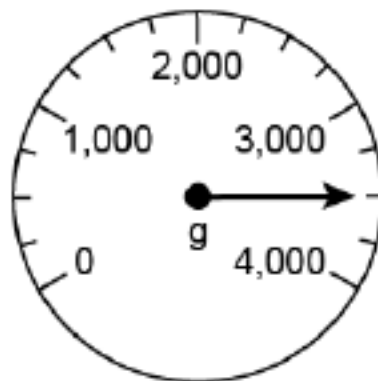
5. Fill in the missing numbers.



6. The bar chart shows the approximate populations of 3 different towns. What are the populations?



7. What mass does each scale show?

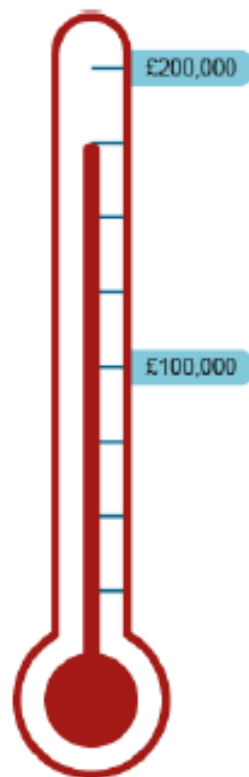


Year 6 – Number and Place Value (Continued)

Ready to Progress Criterion:

6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

8. Some children are trying to raise £200,000 for charity. The diagram shows how much they have raised so far.



- How much money have they raised?
- How much more money do they need to raise to meet their target?

Number and Place Value

5NPV-5

				<u>5NPV-5</u> Convert between units of measure, including using common decimals and fractions.	
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Year 5 – Number and Place Value

Ready to Progress Criterion:

5NPV–5 Convert between units of measure, including using common decimals and fractions.

5NPV–5 Example assessment questions

1. Fill in the missing numbers to complete these conversions between units.

$1.8 \text{ litres} = \boxed{} \text{ ml}$

$\frac{3}{4} \text{ km} = \boxed{} \text{ m}$

$5\frac{1}{2} \text{ cm} = \boxed{} \text{ mm}$

$£8.12 = \boxed{} \text{ p}$

$4\frac{1}{4} \text{ kg} = \boxed{} \text{ g}$

$3.4 \text{ m} = \boxed{} \text{ cm}$

$21 \text{ mm} = \boxed{} \text{ cm}$

$2,250 \text{ ml} = \boxed{} \text{ litres}$

$650 \text{ cm} = \boxed{} \text{ m}$

$8,300 \text{ m} = \boxed{} \text{ km}$

$165 \text{ p} = £\boxed{}$

$750 \text{ g} = \boxed{} \text{ kg}$

2. Put these volumes in order from smallest to largest.

0.75 litres

1.1 litres

0.3 litres

$\frac{1}{5}$ litre

900ml

$1\frac{1}{2}$ litres

3. Put these lengths in order from smallest to largest.

0.45m

10mm

208cm

$2\frac{1}{2}$ m

80cm

0.9m

$\frac{1}{2}$ cm

4. Maya needs to post 3 parcels. The mass of each parcel is shown below. How much do the parcels weigh altogether, in kilograms?

Parcel	Mass of parcel
A	3.2kg
B	4,500g
C	$1\frac{1}{2}$ kg

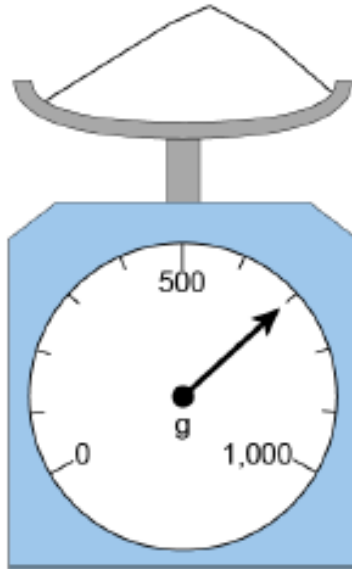
5. Finn has a $7\frac{1}{2}$ m length of wood. How many $\frac{3}{4}$ m length pieces can he cut from it?

Year 5 – Number and Place Value (Continued)

Ready to Progress Criterion:

5NPV–5 Convert between units of measure, including using common decimals and fractions.

6. I need $1\frac{1}{4}$ kg of flour for a recipe. I pour some flour into the weighing scales.
How much more flour do I need for the recipe?



7. Fill in the values in the empty circles so that each row and column of 3 circles adds to 5km.

