

## Year 2 Lea Maths Ladders

### Number and place value

1. I can demonstrate an understanding of place value but may still need apparatus to support me (eg: by stating the difference in the tens and ones between 2 numbers ie. 77 and 33 has a difference of 40 for the tens and a difference of 4 for the ones; by writing number statements such as  $35 < 53$  and  $42 > 36$ )
2. I can count in 2s, 5s and 10s from 0 and use counting strategies to solve problems eg count the number of chairs in a diagram when the chairs are organised in 7 rows of 5)
3. I can count in steps of 2, 3 and 5 from 0, and in tens from any number, **forwards**
4. I can count in steps of 2, 3 and 5 from 0, and in tens from any number, **backwards**.
5. I can read and write numbers up to a 100 in numerals (eg write 14 and 41 correctly)
6. I can compare and order numbers from 0 up to 100; using  $<$   $>$   $=$  signs.
7. I recognise the place value of each digit in a 2-digit number.
8. I can partition 2-digit numbers into different combinations of tens and ones (which may include using apparatus) eg: 23 is the same as 2 tens and 3 ones or 1 ten and 13 ones
9. I can identify, represent and estimate numbers using different representations, including the number line.
10. I can use place value and number facts to solve problems.

### Calculations

11. I can recognise odd and even numbers.
12. I can use number bonds and related subtraction facts within 20 (eg:  $18 = 9 + ?$ ,  $15 = 6 + ?$ )
13. I can recall doubles and halves to 20 (eg: I know that double 2 is 4, double 5 is 10 and half of 18 is 9)
14. I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
15. I can subtract mentally a 2 digit number from another 2 digit number when there is no regrouping required (eg:  $74 - 33$ )
16. I can work out mental calculations where regrouping is required (eg:  $52-27$ ;  $91-73$ )
17. I can add and subtract mentally, including:
  - a. A 2-digit number and ones
  - b. A 2-digit number and tens
  - c. Two 2-digit numbers
  - d. Adding three 1-digit numbers
18. I can add and subtract numbers using concrete objects and pictorial representations, including:
  - a. A 2-digit number and ones
  - b. A 2-digit number and tens
  - c. Two 2-digit numbers
  - d. Adding three 1-digit numbers

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### Calculations ctd

19. I can add 2 digit numbers within 100 (eg:  $48 + 35$ ) and can demonstrate the method using concrete apparatus or pictorial representations
20. I can use estimation to check my answers are reasonable (eg:  $48 + 35$  will be less than 100)
21. I recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.
22. I recognise the relationship between addition and subtraction and can re-write addition statements as simplified multiplication statements (eg:  $10+10+10+5+5 = 3 \times 10 + 2 \times 5 = 4 \times 10$ )
23. I can solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.
24. I can solve problems with addition and subtraction applying my increasing knowledge of mental and written methods.
25. I can solve more complex missing number problems (eg:  $14 + ? - 3 = 17$ ;  $14 + ? = 15 + 27$ )
26. I can reason about addition (eg: that the sum of 3 odd numbers will always be odd)

I can recall and use  $\times$  and  $\div$  facts for the:

27. 2 x
28. 5 x
29. 10 x tables,
30. I can recall and use multiplication and division facts for the 2, 5 and 10x tables to solve problems showing an understanding of commutativity (eg 7 groups of 5 from 35 blocks and writing  $35 \div 5 = 7$ ; sharing 40 cherries between 10 people and writing  $40 \div 10 = 4$ ; stating the value of six 5p coins)
31. I can calculate mathematical statements for multiplication and division and write them using the  $\times$   $\div$  and  $=$  signs.

I can solve problems involving  $\times$  and  $\div$  using:

32. Materials
33. Arrays
34. repeated addition
35. mental methods
36. multiplication and division facts, including problems in context.
37. I can show that addition of two numbers can be done in any order
38. I can show that subtraction of one number from another cannot be done in any order
39. I can show that multiplication of two numbers can be done in any order and division cannot.

Calculations ctd

40. I can solve word problems that involve more than 1 step (eg: which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?)
41. I can use multiplication facts to make deductions outside known multiplication facts ( eg: I know that multiples of 5 have a 0 or a 5 at the end and use this to reason that  $18 \times 5$  cannot be 92 as it is not a multiple of 5)
42. I can determine remainders given known facts (eg:  $15 \div 5 = 3$  has a remainder of 0 and I recognise that  $16 \div 5$  will have remainder of 1: I know that  $2 \times 7 = 14$  and  $2 \times 8 = 16$ ; I can explain that making pairs of socks from 15 identical ones will give 7 pairs and one left over)

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### Fractions

43. I can identify  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  and know all parts must be equal parts of the whole

44. I can find and compare fractions of amounts (eg:  $\frac{1}{4}$  of £20 = 5 and  $\frac{1}{2}$  of £8 = £4, so  $\frac{1}{4}$  of £20 is greater than  $\frac{1}{2}$  of £8)

45. I recognise, find, name and write fractions  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  of a length or shape

46. I recognise, find, name and write fractions  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  of a set of objects or quantity

47. I can write simple fractions.

48. I recognise the equivalence of  $\frac{2}{4}$  and  $\frac{1}{2}$

### Measurement

49. I can read scales in divisions of 1s, 2s, 5s and 10s in a practical situation where all numbers on the scale are given (eg I can read the temperature on a thermometer or measure capacities using a measuring jug)

50. I can read scales in divisions of 1s, 2s, 5s and 10s in practical situations where not all numbers of the scales are given

51. I can compare and order lengths, mass, volume/capacity and record the results with  $>$ ,  $<$  and  $=$ .

I can choose and use standard units to estimate and measure:

52. length/height in any direction in m and cm using rulers.

53. mass in kg and g using scales.

54. temperature in  $^{\circ}\text{C}$  using thermometers.

55. capacity in l and ml using measuring vessels.

56. I recognise and use symbols for £ and p and combine amounts to make a particular value.

57. I can solve simple problems in a practical context involving addition and subtraction of money of the same units, including giving change.

58. I can use different coins to make the same amount (eg: use coins to make 50p in different ways; work out how many £2 coins are needed to exchange for a £20 note)

I can tell and write the time to include:

59. O'clock

60. Half past

61. quarter to/

62. Quarter past

63. I can draw the hands on a clock face to show these times.

64. I can compare and sequence intervals of time.

65. I can read the time on the clock to the nearest 15 minutes.

66. I can read the time on the clock to the nearest 5 minutes

## Year 2 Lea Maths Ladders

### Geometry - properties of shapes

67. I recognise and can name some triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres from a group of shapes or from pictures of the shapes

68. I can compare and sort common 2D shapes and everyday objects.

69. I can compare and sort common 3D shapes and everyday objects.

70. I can identify and describe the properties of 2D shapes, including the number of sides and line of symmetry in a vertical line.

71. I can identify and describe the properties of 3D shapes including the number of edges, vertices and faces.

72. I can describe similarities and differences of shape properties (eg: find 2 different 2D shape that only have 1 line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices but I can describe what is different about them)

### Geometry - position and direction

73. I can order and arrange combinations of mathematical objects in patterns and sequences. I can use mathematical vocabulary to describe position, direction and movement including:

74. movement in a straight line and

75. distinguishing between rotation as a turn

76. in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

### Statistics

77. I can interpret and construct simple pictograms.

78. I can interpret and construct tally charts.

79. I can interpret and construct block diagrams.

80. I can interpret and construct simple tables.

81. I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.

82. I can ask and answer questions about totalling and comparing categorical data.

