End of Year Maths Assessment

Year 2

This resource corresponds with the New National Curriculum objectives for Year 2, and has been designed to be used as an aide in assessing pupils' mathematical knowledge at the end of Year 2.

This assessment can be used to assist teachers with end of year ability levelling, planning/assessment and as an ideal support tool for parents' evenings/progress meetings etc.

The content addresses each curricular objective outlined in the New National Curriculum in chronological order to give insight into strengths or gaps in each child's mathematical knowledge.

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End of Year Maths Assessment – Year 2

Year 2 National Curriculum Objectives:

Number - number and place value

1. (2N1) Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward

5. (2N2a) Read and write numbers to at least 100 in numerals and in words

4. (2N2b) Compare and order numbers from 0 up to 100; use <, > and = signs

2. (2N3) Recognise the place value of each digit in a two-digit number (tens and ones)

3. (2N4) Identify, represent and estimate numbers using different representations, including the number line

1, 2, 3, 4 & 5. (2N6) Use place value and number facts to solve problems

Number - addition and subtraction

7. (2C1) Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100

(2C2a) Add and subtract numbers mentally, including:

8. a two-digit number and ones

9. a two-digit number and tens

10. two two-digit numbers

11. adding three one-digit numbers

(2C2b) Add and subtract numbers using concrete objects and pictorial representations, including:

* a two-digit number and ones

* a two-digit number and tens

* two two-digit numbers

* adding three one-digit numbers

13. (2C3) Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems

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Year 2 National Curriculum Objectives:

(2C4) Solve problems with addition and subtraction:

* using concrete objects and pictorial representations, including those involving numbers, quantities and measures

6. applying their increasing knowledge of mental and written methods

12. (2C9a) Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot

Number - multiplication and division

14. (2C6) Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers

15. (2C7) Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs

17. (2C8) Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

16. (2C9b) Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

Number - fractions

18, 19, 20 & 21. (2F1a) Recognise, find, name and write fractions 1/3 , 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity

22. (2F1b) Write simple fractions for example, 1/2 of 6 = 3

23. (2F2) Recognise the equivalence of 2/4 and 1/2

Measurement

24, 25 & 26. (2M1) Compare and order lengths, mass, volume/capacity and record the results using >, < and =

* (2M2) Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (° C); capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels

27a. (2M3a) Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value

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Year 2 National Curriculum Objectives:

27b. (2M3b) Find different combinations of coins that equal the same amounts of money

32. (2M4a) Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times

29. (2M4b) Compare and sequence intervals of time

30 & 31. (2M4c) Know the number of minutes in an hour and the number of hours in a day

28. (2M9) Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

Geometry - properties of shapes

* (2G1a) Compare and sort common 2-D shapes and everyday objects

* (2G1b) Compare and sort common 3-D shapes and everyday objects

33. (2G2a) Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line

34. (2G2b) Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces

35. (2G3) Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]

Geometry - position and direction

36. (2P1) Order and arrange combinations of mathematical objects in patterns and sequences

37. (2P2) Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise)

Statistics

38e. (2S1) Interpret and construct simple pictograms, tally charts, block diagrams and simple tables

38a, b & d. (2S2a) Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity

38c. (2S2b) Ask and answer questions about totalling and comparing categorical data

*these objectives are practical so are not included in this assessment

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Number and Place Value

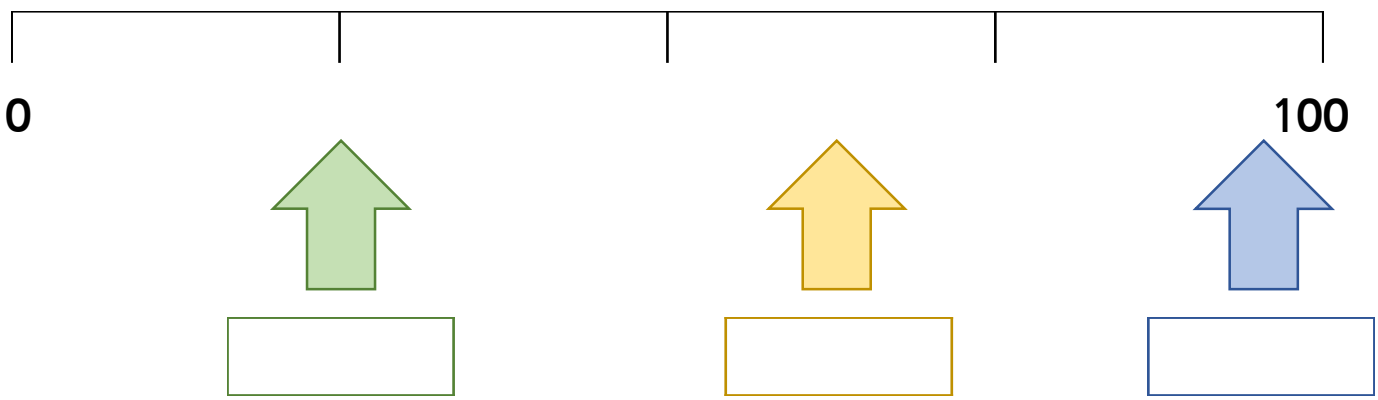
1. Complete the sequence of numbers.

0	3	6	9						
45	40	35	30						
0	10	20	30						
25	30	35	40						
32	34	36	38						

2. Write the value of each underlined digit.

7<u>6</u>	_____	2<u>5</u>	_____	1<u>9</u>	_____
3<u>5</u>	_____	5<u>2</u>	_____	1<u>4</u>	_____

3. Estimate the number each arrow is pointing to on the number line.



4. Use the symbols > or < to compare the numbers.

38 ☐ 36 25 ☐ 52 87 ☐ 93

5. Write the following numbers in words.

32	_____	51	_____	68	_____
92	_____	45	_____	100	_____

6. Solve the problems.

67	+	12	=		72	–	54	=	
41	–	17	=		34	+	26	=	
68	+	24	=		98	–	59	=	

7. Complete the following number bonds mentally.

	+	12	=	20		+	5	=	20
20	–		=	4	20	–		=	6
	+	9	=	20		+	2	=	20
20	–		=	7	20	–		=	3

8. Complete each calculation.

36	+	6	=		74	–	8	=	
62	–	9	=		45	+	7	=	
57	+	8	=		83	–	6	=	

9. Complete each calculation.

73	+	20	=		53	–	40	=	
85	–	30	=		27	+	50	=	
52	+	40	=		76	–	30	=	

10. Complete each calculation.

87	+	12	=		76	–	38	=	
95	–	67	=		54	+	24	=	
69	+	23	=		48	–	36	=	

11. Complete the calculations.

5	+	6	+	2	=		9	+	7	+	4	=	
8	+	2	+	6	=		7	+	4	+	2	=	
7	+	8	+	8	=		3	+	9	+	8	=	

12. Write an addition and subtraction sentence for each set of numbers.

16, 32, 16		+		=				–		=	
42, 27, 15		+		=				–		=	
79, 24, 55		+		=				–		=	

13. Solve each missing number problem by using the inverse calculation.

37	+		=	98		–	=	
	–	16	=	82		+	=	
	+	43	=	89		–	=	

14. Write the next five multiples in each row.
Then, circle the odd numbers in red and the even numbers in blue.

14	16	18	_____	_____	_____	_____	_____		
15	20	25	_____	_____	_____	_____	_____		
0	10	20	_____	_____	_____	_____	_____		

15. Use the symbols x, ÷ or = to complete each number sentence.

7	☐	5	☐	35		6	☐	2	☐	12	
40	☐	2	☐	20		30	☐	10	☐	3	
90	☐	10	☐	9		60	☐	5	☐	12	

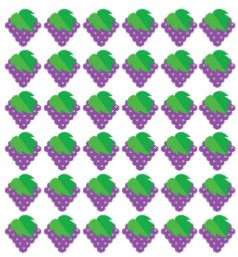
16. Write a multiplication and division sentence for each set of numbers.

2, 9, 18	☐	x	☐	=	☐		☐	÷	☐	=	☐			
11, 5, 55	☐	x	☐	=	☐		☐	÷	☐	=	☐			
80, 8, 10	☐	x	☐	=	☐		☐	÷	☐	=	☐			

17. Write a multiplication sentence, a division sentence, and a repeated addition sentence to describe each array.

☐ x ☐ = ☐ ☐ ÷ ☐ = ☐

☐☐☐☐☐☐☐☐☐☐☐☐

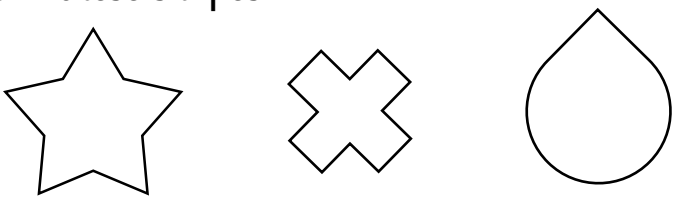


☐ x ☐ = ☐ ☐ ÷ ☐ = ☐

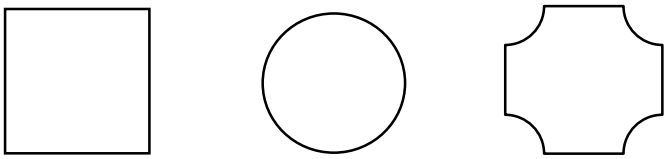
☐☐☐☐☐☐☐☐☐☐☐☐

Fractions

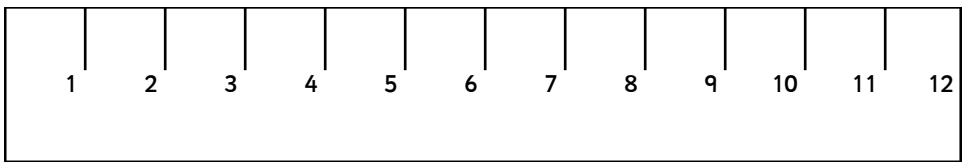
18. Shade $\frac{1}{2}$ of each of these shapes.



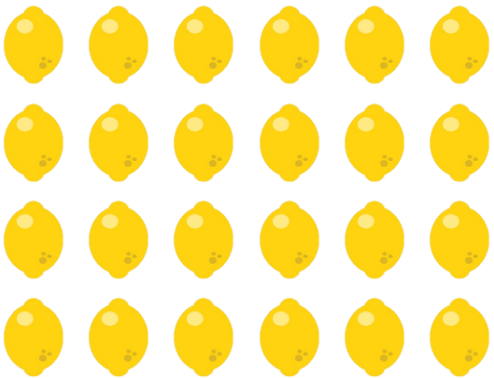
19. Shade $\frac{1}{4}$ of each of these shapes.



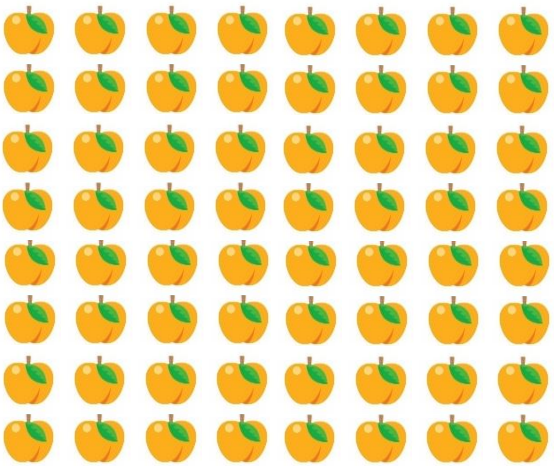
20. Shade $\frac{1}{3}$ of this ruler.



21. Circle $\frac{2}{4}$ of the lemons.



Circle $\frac{3}{4}$ of the peaches.



22. Calculate the given fraction of each whole number.

$\frac{1}{4}$ of 24 = ☐

$\frac{1}{2}$ of 22 = ☐

$\frac{1}{2}$ of 18 = ☐

$\frac{3}{4}$ of 32 = ☐

23. Circle the fractions that are equal.

$\frac{2}{4}$ $\frac{1}{3}$ $\frac{1}{2}$ $\frac{1}{4}$

Measurement

24. Order the following lengths from tallest to shortest.

76cm	12cm	102cm	34cm	58cm

25. Order the following weights from heaviest to lightest.

54kg	79kg	17kg	24kg	42kg

26. Use the <, > or = symbols to compare the following measurements.

42 kg		35 kg	64 l		47 l
46 cm		92 cm	25 m		25 m
27 °C		18 °C	263 ml		271 ml

27. You have the following coins in your piggy bank.

a. What is the total amount of money in your piggy bank?

b. Using only the coins pictured above, show two different ways to make:

61p	£1.50	£3.01

28. You have 97p. You buy three bags of sweets for 23p each. How much change will you receive? Show your workings in the space below.

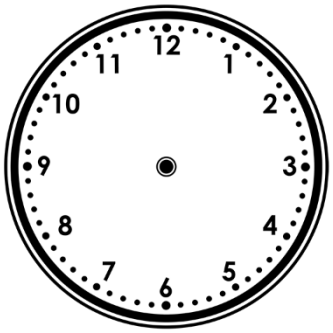
29. Use the <, > or = symbols to compare the following lengths of time.

45 minutes		1 hour	2 hours		90 minutes
Quarter of an hour		15 minutes	Half an hour		20 minutes

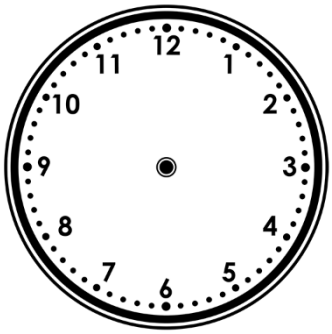
30. How many minutes are in one hour?

31. How many hours are in one day?

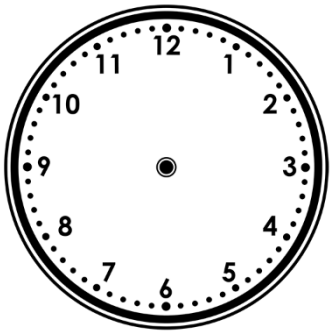
32. Draw hands on the clocks to show these times.



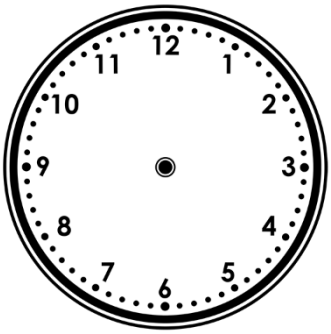
Five minutes past six



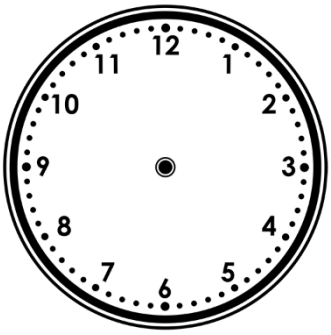
Twenty minutes to ten



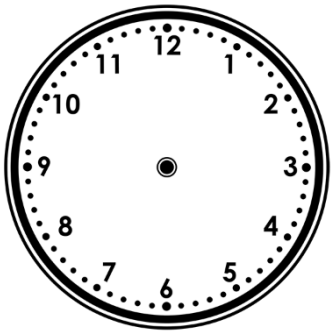
Ten minutes past four



Five minutes to eight



Quarter to one

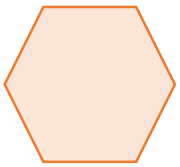
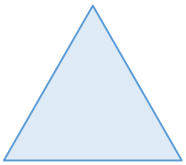


Ten minutes to three

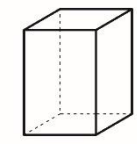
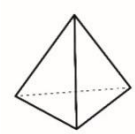
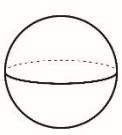
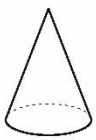
Geometry

33. Write the number of sides each shape has in the boxes below. Then, draw a vertical line of symmetry through each of the shapes.

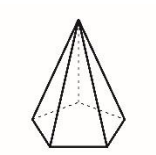
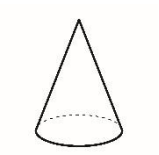
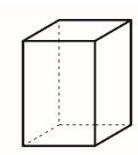
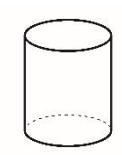
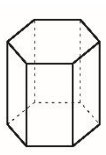


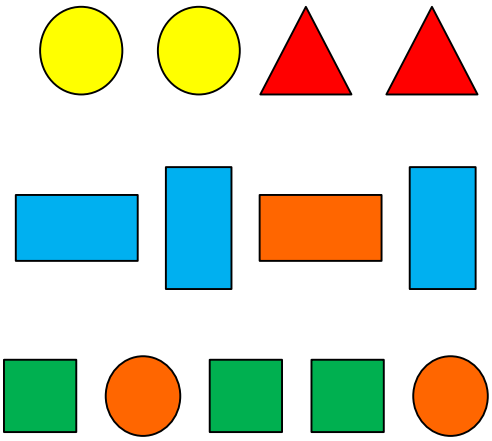
34. Fill in the table with the properties of the 3D shapes.

				
Name of shape				
edges				
vertices				
faces				
curved surfaces				

35. List any 2D shapes you see on the surface of each of the following 3D shapes.

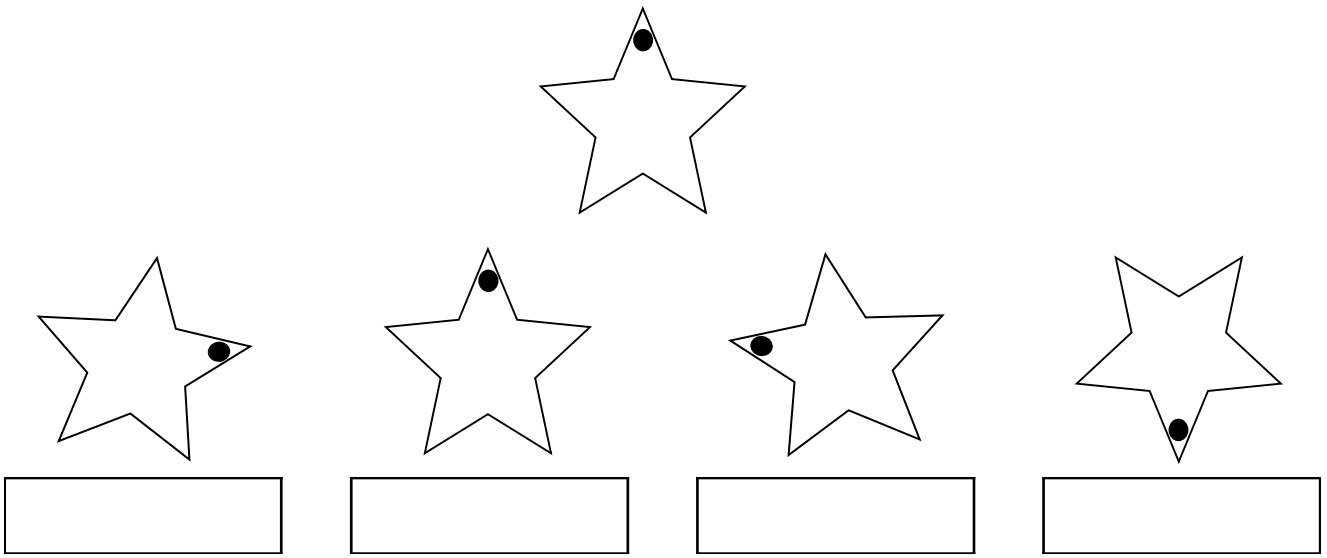
				

36. Repeat the patterns and complete each sequence.

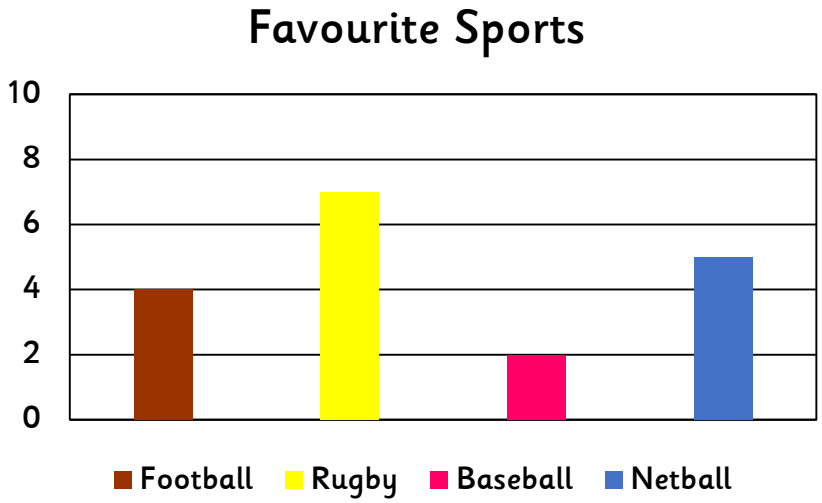


37. Look at the star. Match each shape below to the degree of rotation from the word bank.

half turn	quarter turn clockwise	whole turn	three-quarter turn clockwise



38. Read the bar chart and answer the questions below.



a. What is the most popular sport?

b. What is the least popular sport?

c. How many people voted in total?

d. List the four sports from most to least popular.

e. Fill in the tally chart below to shows the number of votes for each sport.

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Number and Place Value

1. 12, 15, 18, 21, 24, 27
   25, 20, 15, 10, 5, 0
   40, 50, 60, 70, 80, 90
   45, 50, 55, 60, 65, 70
   40, 42, 44, 46, 48 50

2. 7 tens 5 ones 1 ten
   3 tens 5 tens 4 ones

3. Green arrow = 25, Yellow arrow = Accept answers between 58 and 65, Blue arrow = Accept answers between 90 and 98

4. > , <, <

5. thirty-two fifty-one sixty-eight
   ninety-two forty-five one hundred

6. 79 18
   24 60
   92 39

7. 8 15
   16 14
   11 18
   13 17

8. 42 66
   53 52
   65 77

9. 93 13
   55 77
   92 46

10. 99 38
    28 78
    92 12

11. 13 20
    16 13
    23 20

12. 16 + 16 = 32, 32 – 16 = 16
15 + 27 = 42 or 27 + 15 = 42, 42 – 27 = 15 or 42 – 15 = 27
55 + 24 = 79 or 24 + 55 = 79, 79 – 24 = 55 or 79 – 55 = 24

13. 61 98 – 37 = 61
98 82 + 16 = 98
46 89 – 43 = 46

Multiplication and Division

14.

20	22	24	26	28
30	35	40	45	50
30	40	50	60	70

15. 7 x 5 = 35 6 x 2 = 12
40 ÷ 2 = 20 30 ÷ 10 = 3
90 ÷ 10 = 9 60 ÷ 5 = 12

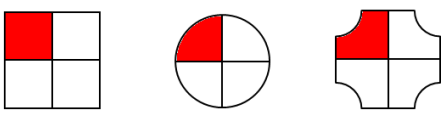
16. 2 x 9 = 18 or 9 x 2 = 18, 18 ÷ 2 = 9 or 18 ÷ 9 = 2
11 x 5 = 55 or 5 x 11 = 55, 55 ÷ 5 = 11 or 55 ÷ 11 = 5
8 x 10 = 80 or 10 x 8 = 80, 80 ÷ 8 = 10 or 80 ÷ 10 = 8

17. 4 x 5 = 20 or 5 x 4 = 20 20 ÷ 4 = 5 or 20 ÷ 5 = 4
4 + 4 + 4 + 4 + 4 = 20 or 5 + 5 + 5 + 5 = 20

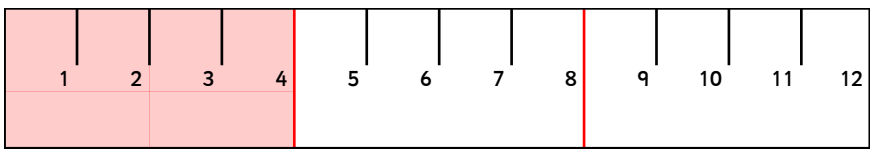
6 x 6 = 36 36 ÷ 6 = 6
6 + 6 + 6 + 6 + 6 + 6 = 36

Fractions

18. 

19. 

20. Any of these thirds could be shaded:



21. Circle any 12 Circle any 48

22. 6 11
9 24

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

Measurement

24.

102cm	76cm	58cm	30cm	12cm

25.

79kg	54kg	42kg	24kg	17kg

26. > >
< =
> <

27a. £9.57

27b. 61p: Answers include 20p + 20p + 20p + 1p = 61p / 50p + 10p + 1p
£1.50p: Answers include £1 + 50p / £1 + 20p + 20p + 10p
£3.01: Answers include £1 + £1 + £1 + 1p / £2 + 50p + 20p + 20p + 10p + 1p

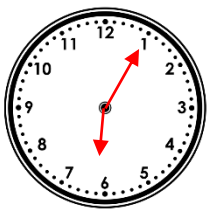
28. 23p + 23p + 23p = 69p, 97p – 69p = 28p

29. < >
= >

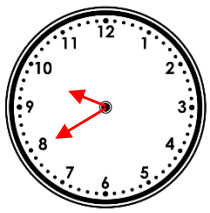
30. 60

31. 24

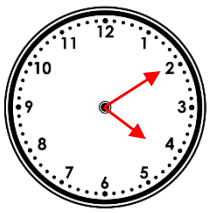
32.



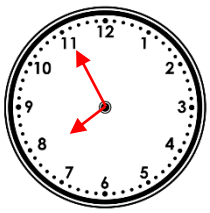
Five minutes past six



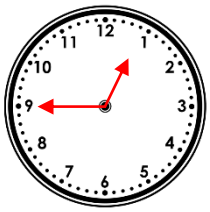
Twenty minutes to ten



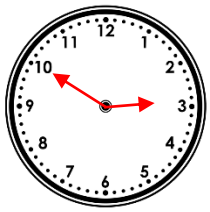
Ten minutes past four



Five minutes to eight



Quarter to one



Ten minutes to three

Geometry

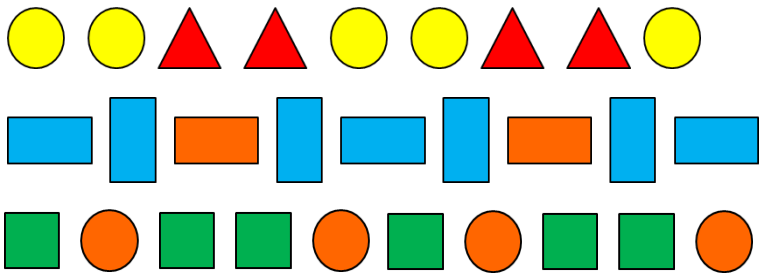
33. 4 sides, 4 sides, 6 sides, 3 sides, ensure lines of symmetry are in the centre of each shape.

34.

				
Name of shape	cuboid	pyramid (tetrahedron)	sphere	cone
edges	12	6	0	1
vertices	8	4	0	1
faces	6	4	0	1
curved surfaces	0	0	1	1

35.

				
triangle	circle	rectangle	circle	rectangle
pentagon		square		hexagon

36. 

37. quarter turn clockwise / whole turn / three-quarter turn clockwise / half turn

38. a. rugby
b. baseball
c. 18
d. rugby, netball, football, baseball
e.

Sport	Number of votes
Football	𝍸
Rugby	𝍸 ||
Baseball	||
Netball	𝍸