KS2 Practice Paper 1

Do not use a calculator

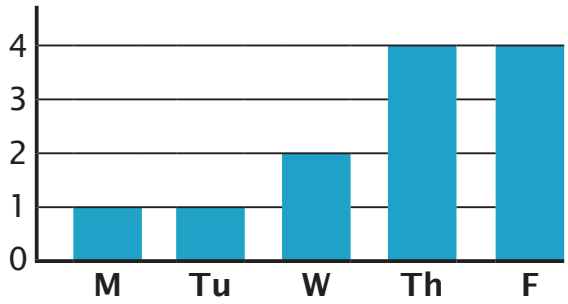
1. This chart shows the number of packets of different flavours of crisps sold by a shop.

	M	Tu	W	Th	F
Ready Salted	3	1	2	4	0
Salt'N Vinegar	4	2	5	3	1
Cheese'N Onion	5	1	3	1	4
Roast Beef	3	2	6	4	1
Prawn	1	1	2	4	4

(a) How many packets of crisps were sold on Wednesday?

(b) Each packet of Ready Salted crisps costs 15p. How much was spent on Ready Salted crisps in the whole week?

(c) This is a graph of one flavour of crisps. Which flavour is it?

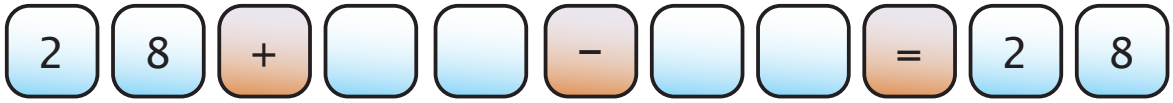


2.

(a) Jim has £2. After buying one item from those shown he has £1.20 left. What did Jim buy?

(b) Jane has two 50p coins and three 20p coins. She buys a packet of Zubes and a yoghurt. How much money does she have left?

3. Numbers are missing on four of these calculator buttons.
Copy the diagram and write in numbers to make the answer 28.



4. A painter uses special waterproof paint for fishing rods.
The cost for painting different length of rods is shown in the table.

Length	Price for 1 rod
0m up to 1m	85p
1m up to $1\frac{1}{2}$m	£1.20
$1\frac{1}{2}$m up to 2m	£1.55
2m up to $2\frac{1}{2}$m	£2.20
$2\frac{1}{2}$m up to 4m	£3.25

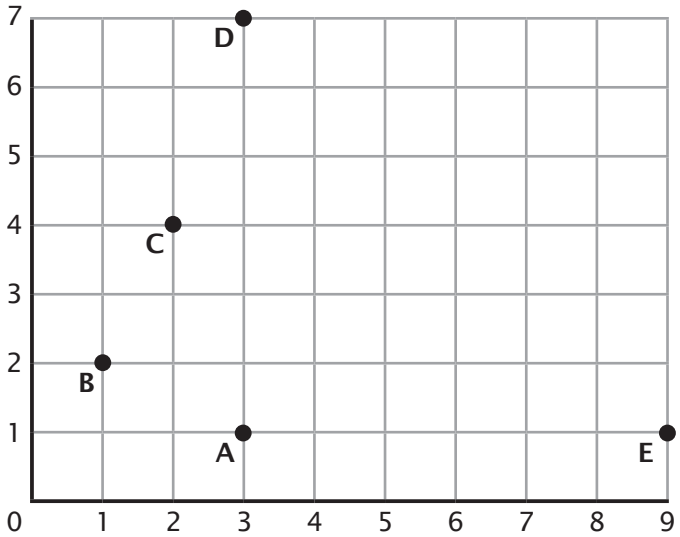
(a) What is the cost of painting one 75 cm rod?

(b) Find the total cost of painting 10 of the 3 m rods.

5.

(a) Points **A**, **D** and **E** are the three corners of a square.
Write down the co-ordinates of the other corner.

(b) Points **A**, **B** and **C** are the three corners of a square.
Write down the co-ordinates of the other corner.



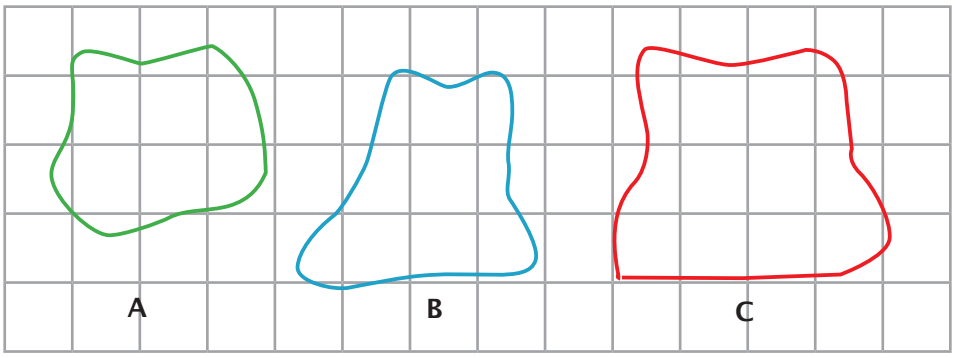
6. Write the following with the correct signs inside the circles.

(a) 4 x 3 x 2 ◯ 1 = 25

(b) 5 x 2 x 4 ◯ 3 = 37

(c) 6 + 5 ◯ 4 ◯ 1 = 8

7. Estimate the area of each shape. Give your answers as a number of squares.

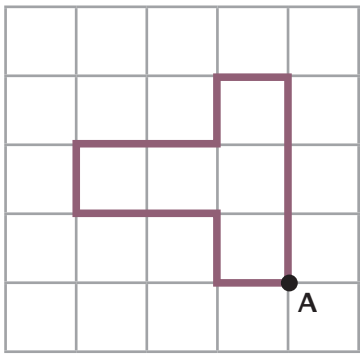


8.

(a) Here is a number pattern in which the rule is '3 less than'.
Find the missing number.

(b) In this number pattern, the rule is 'multiply by 2'.
Find the missing number.

9. Draw the shape on squared paper.
Draw the new position after it is turned clockwise through one right angle around the point A.



10. Work out the missing digits in each division.

(a)
```
      □ □ 2
4 ) 7 2 □
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(b)
```
      2 9
3 ) □ 7
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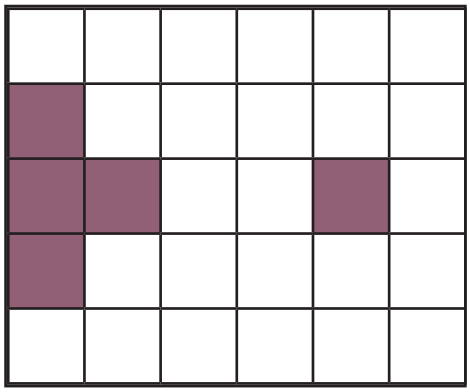
11. Here is a 5 x 6 grid made of centimetre squares. Some of the grid has been shaded.



(a) What area has *not* been shaded?

(b) How many squares are there in 20% of the whole grid?

(c) Copy the diagram and shade in 10% of the squares so that your final diagram has reflective symmetry.

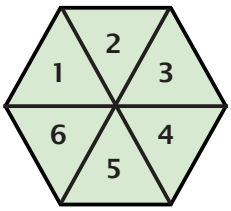
12.

(a) 308 children visit Eurodisney. They go in groups of 13. One group has less than 13. Every group of children has one adult with them. How many adults are there?

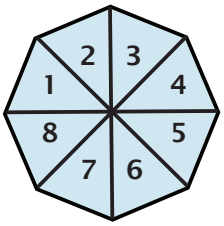
(b) Work out the total cost of buying every child a drink at 35p each.

13. Here are two spinners.

Gill's Spinner



Nick's Spinner



Say whether the following statements are true or false. Explain why.

(a) Gill is more likely to spin a 4 than Nick.

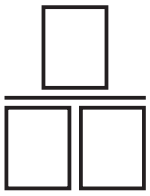
(b) Gill and Nick are equally likely to spin an even number.

(c) If Nick spins his spinner eight times, he is bound to get at least one 8.

14. Here are some number cards.

(a) Use two cards to make a fraction which is equal to $\frac{1}{2}$.

(b) Use three of the cards to make the smallest possible fraction.



15. Reena buys 8 jars of honey. Each jar costs £1.15.
She works out that it will cost her £42.

(a) Without working out the exact answer, explain why you know she must be wrong.
(b) Work out the correct answer.

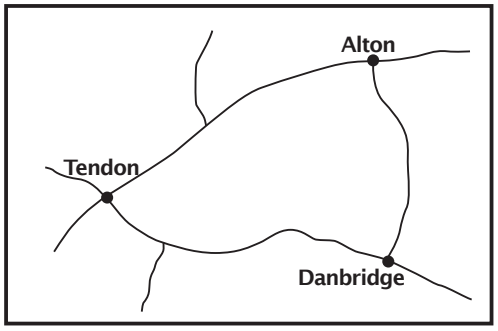
16. There were 10 children on a coach journey. The mean age of the children was 11 and the range of their ages was 4.
Write each statement below and then write next to it whether it is True, Possible or False.

(a) The youngest child was 9 years old.

(b) Every child was 11 years old.

(c) All the children were at least 10 years old.

17. The map has a scale of 1 cm to 8 km.



(a) The road from Tendon to Alton, measured on the map, is 4.3 cm long.
What is the length of the road in kilometres?

(b) The road from Danbridge to Alton is 24 km long.
How long is the road on the map in cm?

KS2 Practice Paper 2

You may use a calculator

1. Here are three number cards.

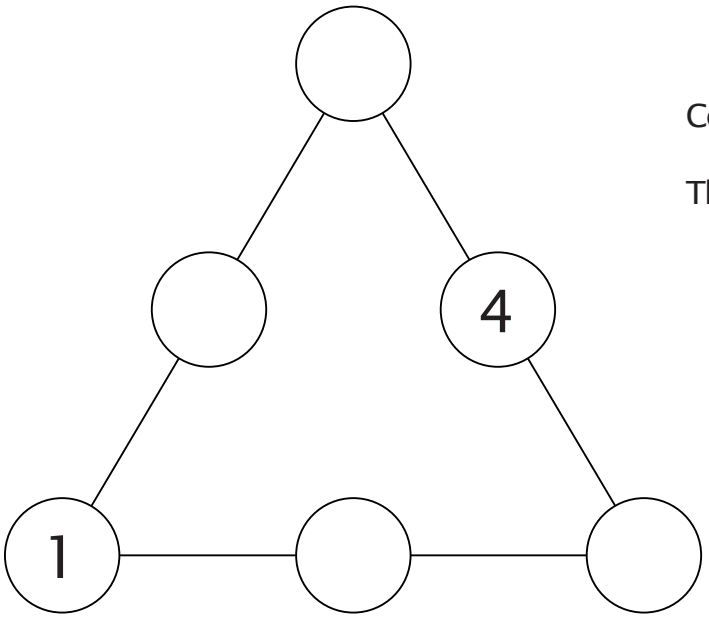
One number that can be made with the three cards is 617.

(a) Use the three cards to make a number which is *more* than 617.

(b) Use the three cards to make a number which is *less* than 617.

(c) Use the three cards to make an even number.

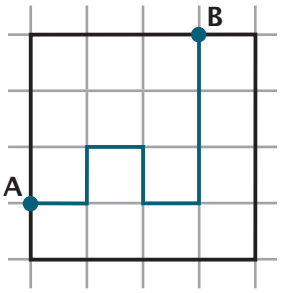
2. This is a number triangle. The numbers along each edge add up to 9.



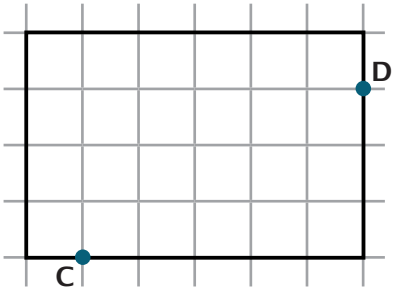
Copy and complete the triangle.

The six numbers are 1, 2, 3, 4, 5 and 6

3. A line starts at A and goes along the dotted lines to B.
It divides the area of the square into two halves.



(a) Draw the rectangle shown and draw a line from C to D which divides the area into two halves.



(b) Draw the rectangle again.
Draw a new line from C to D which divides the area into two parts so that one part has twice the area of the other part.

4. Here is a row of numbers.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

(a) Find *two* numbers next to each other which add up to 29.

(b) Find *three* numbers next to each other which add up to 36.

5. Copy the following and find the missing number.

(a) $\square \div 3 = 50$

(b) $\square \times 6 = 84$

(c) $\square \div 5 = 21$

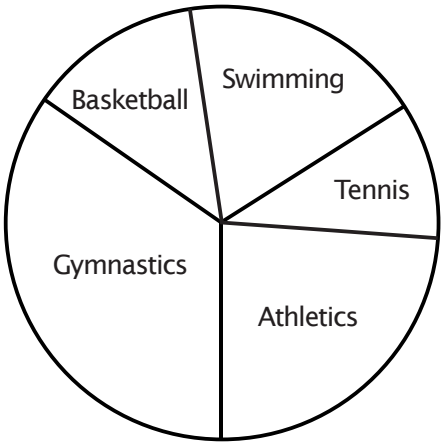
(d) $\square \times 9 = 180$

6. An ice cream and a can of drink together costs 85p.
Two ice creams and a can of drink together costs £1.40.

(a) How much does one ice cream cost?

(b) How much would you pay for three ice creams and two cans of drink?

7. In a survey the children at a school were asked to state their favourite sport in the Olympics.



(a) Estimate what fraction of the children chose gymnastics.

(b) There are 120 children in the school. Estimate the number of children who chose athletics.

(c) 15% of the children chose swimming. How many children was that?

8. Write each of the following in the units shown, using decimals when needed.

(a) 2 m 35 cm = ☐ m

(b) 350 g = ☐ kg

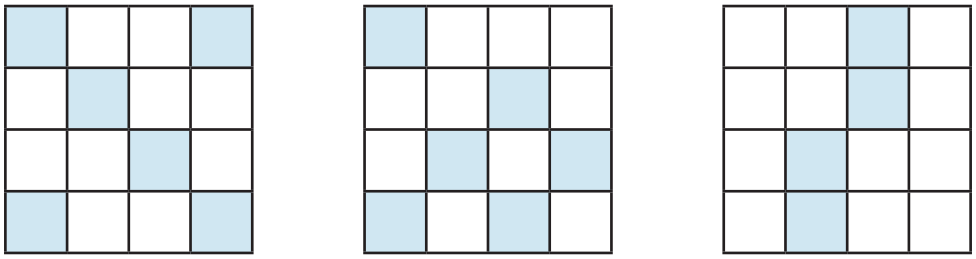
(c) 0·62 m = ☐ cm

(d) 3·3 kg = ☐ g

(e) 44 cm = ☐ m

(f) 27 mm = ☐ cm

9. Here are three patterns.

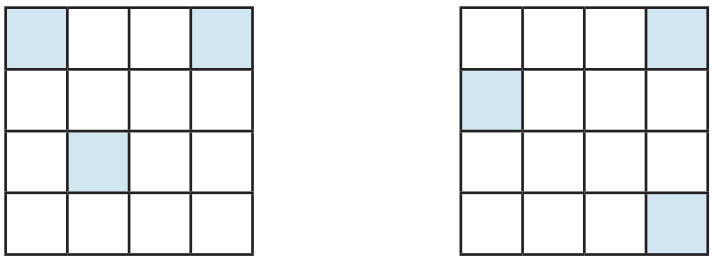


A B C

(a) Copy the table and then write 'yes' or 'no' in the spaces to describe each pattern.

	A	B	C
Reflective symmetry	Yes		
Rotational symmetry			

(b) Draw the two patterns below and shade one more square in each so that the final patterns have reflective symmetry.



10. The rule for the number sequences below is 'double and add 1'.
Write down each sequence and fill in the missing numbers.

(a) 1 → 3 → 7 → 15 → ☐

(b) ☐ → 9 → 19 → 39

(c) ☐ → 11 → ☐ → ☐

11. Philip has 10 stick insects. These are their lengths in cm.

7·1	6·8	8·5	9·8	4·4
6·5	8·1	5·2	6·6	8·0

What is the mean (average) length of his stick insects?

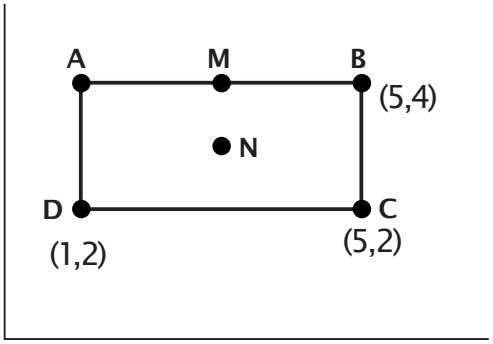
12. On squared paper, draw a four-sided shape which has one pair of parallel sides.

13. ABCD is a rectangle.

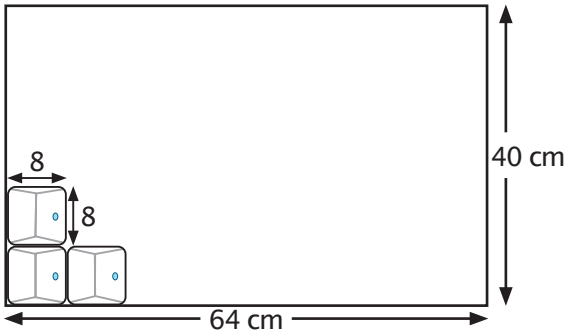
(a) Write down the co-ordinates of A.

(b) M is mid-way between A and B.
What are the co-ordinates of M?

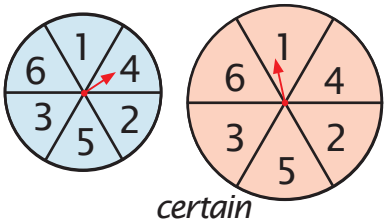
(c) N is in the middle of the rectangle.
What are the co-ordinates of N?



14. The base of a milk carton is a square 8 cm by 8 cm.
The cartons are put on a tray which measures 40 cm by 64 cm.
Work out the largest number of cartons which can go on one tray.



15. Steve spins the spinners shown.
Draw the missing lines to show how likely these things are.



A. The two spinners show 3.

B. The two numbers are different.

C. The two numbers add up to 15.

D. The two numbers add up to an odd number.

certain

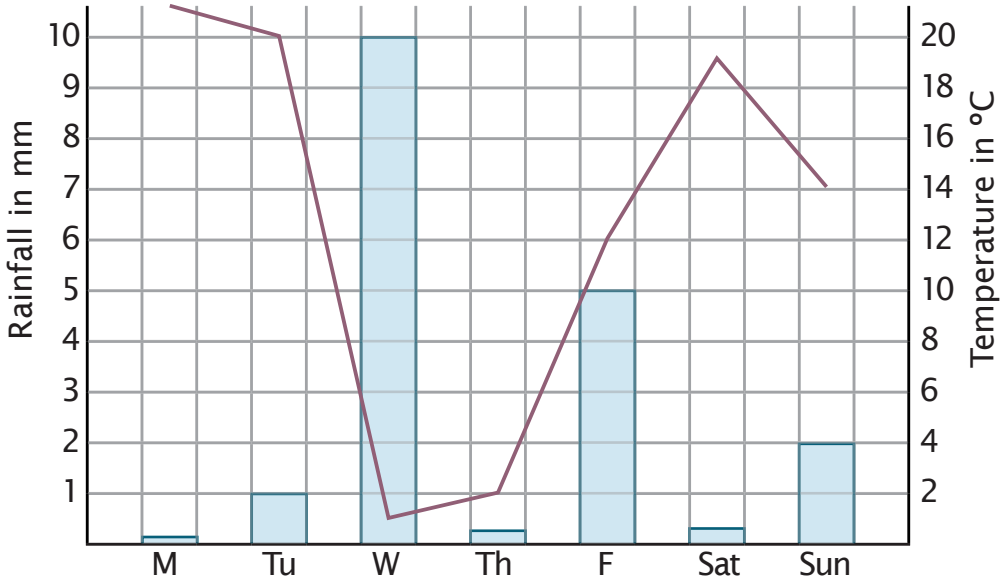
likely

possible

unlikely

impossible

16. This diagram shows the temperature and rainfall readings in one week.
The rainfall is shown as the bar chart.
The temperature is shown as the line graph.

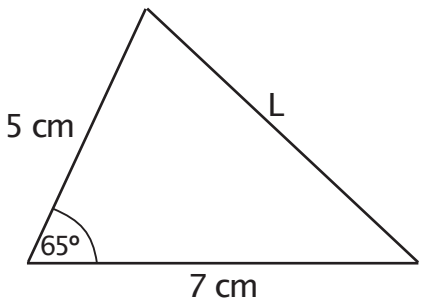


(a) Use both graphs to describe the weather on Monday.

(b) On which day was the weather cold and wet?

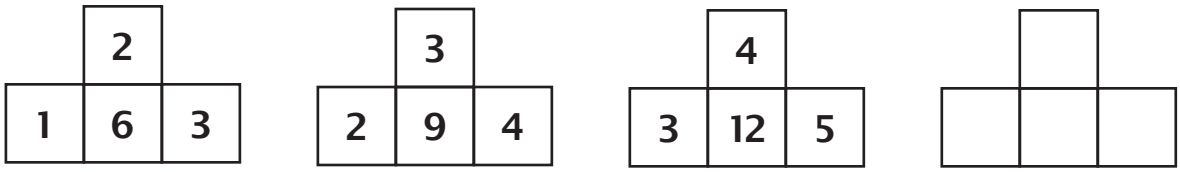
(c) Compare the weather on Thursday and Saturday.

17. Draw, as accurately as you can, the triangle shown.
Measure the length marked L.

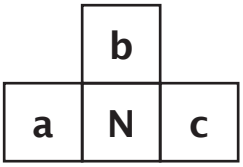


18. A recipe uses 3 eggs and 2 apples for every cake.
A chef has an order for several cakes.
He uses 24 eggs. How many apples does he use?

19. Draw the last shape and fill in the missing numbers to continue the patterns.



Here is a shape using letters.



The rule is
'To find N you add up a, b and c'.
Write the rule without using words.

KS2 Practice Paper 3

You may use a calculator

1. Find the number I am thinking of in each part:

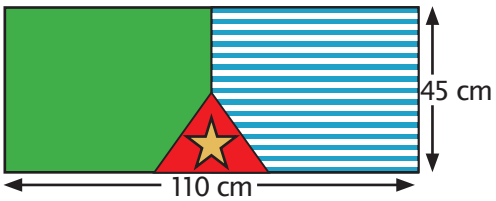
   (a) If I take away 13 from it, I get 44.

   (b) If I double it, I get 350.

   (c) If I divide it by 10, I get 3.2.

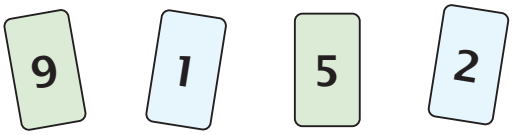
2.

   (a) Work out the area of the flag shown.



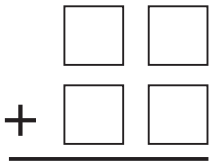
   (b) 40% of the flag is stripes. What area of the flag is stripes?

3. Here are four number cards.

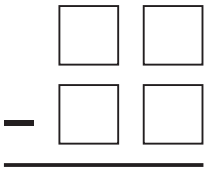


   Use all *four* cards for the following:

   (a) An add.
   The answer must be less than 100.



   (b) A take away.
   The answer must be less than 20.



4. Mr and Mrs Baker and their three children are going to a football match.
Work out the cheapest cost for all the tickets.

Adults	£25.00	Row A
	£21.50	Row B
	£17.00	Row C
Children	£15.00	Row B
	£9.00	Row C

5. Karen measures four things with a tape measure.

Her front door	190 cm
Her pet cat	40 cm
Her brother	125 cm
Her bed	214 cm

Draw a line like the one below and put a cross for each of the things she measured.

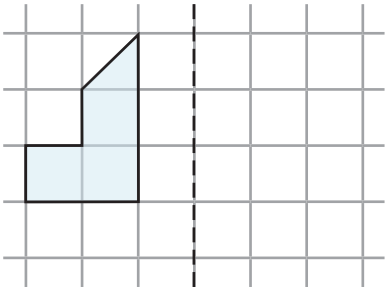
6. On squared paper, draw these shapes:

(a) a quadrilateral with just one right angle

(b) an isosceles triangle

(c) a quadrilateral with no right angles and no parallel sides.

7. Copy the shape on squared paper and then draw the reflection of the shape in the mirror line (shown by the broken line).



8. A hot air balloon will only rise from the ground if the total weight of the people is less than 170 kilograms.

(a) Work out if the balloon can take both Steve and Nick. Show your working.

Name	John	Steve	Anna	Sue	Nick	Christine
Weight in kg	81.5	75.4	59.8	61.4	93.4	53.4

(b) Could the balloon take Anna, Sue and Christine?

9. Copy each line and write +, −, × or ÷ in the circle to make the calculation correct.

(a) $12 \times 5 \bigcirc 3 = 180$

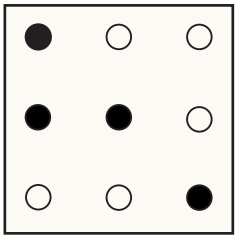
(b) $8 \bigcirc 4 + 5 = 37$

(c) $84 \bigcirc 7 - 5 = 7$

10. Lucy puts 4 pegs in a board.

She turns the board clockwise through one right angle.

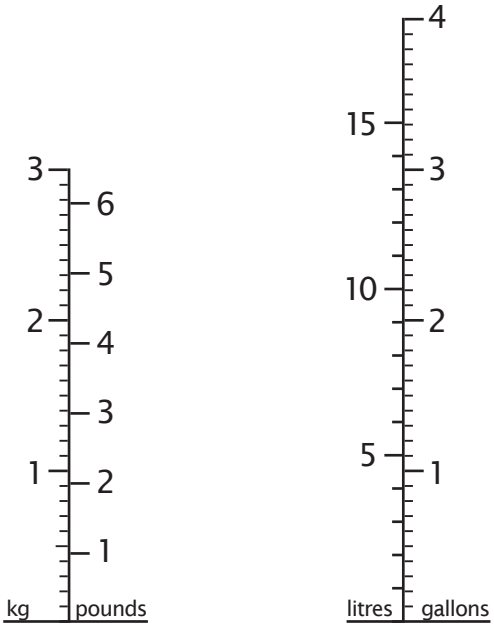
Draw a picture to show how the board looks now.



11. Here are scales for changing

A kilograms and pounds
B litres and gallons

In this question, give your answer to the *nearest whole number.*



(a) About how many kilograms are there in 6 pounds?

(b) About how many litres are there in 3.3 gallons?

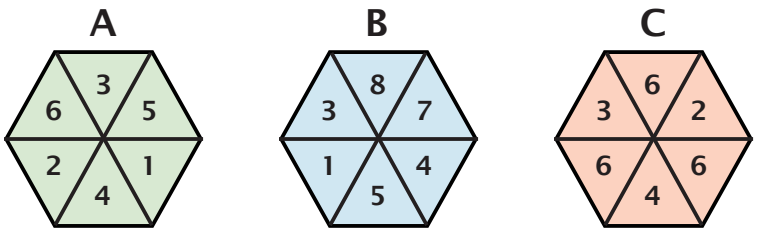
(c) About how many pounds are there in 1.4 kilograms?

12. Do **NOT** use a calculator for this question.

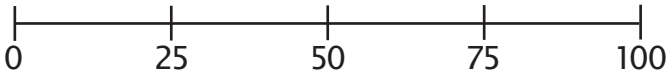
The tables in a school dining room are arranged so that 14 children sit together in one group. How many groups are there if 322 children are in the room?

13. Sumita has three different spinners.

She spins each spinner 100 times.



(a) Draw a number line and draw arrows labelled A, B and C to show your estimate of how many times each spinner will land on a six.



(b) Explain how you worked out your estimate for spinner C.

14. Five friends had a swimming race.
Their times are shown.

Name	Time
Greg	12.94 sec
Ian	9.18 sec
Maya	9.81 sec
Ray	11.22 sec
Rick	10.55 sec

(a) Who came first?

(b) Who came last?

(c) Whose time is nearest to 10 seconds?

15. Write down each calculation and fill in the missing numbers.

(a) $\square 6 \times 8 = 608$

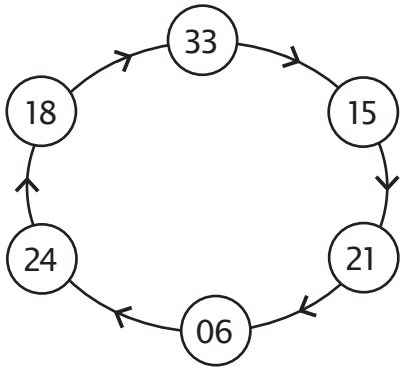
(b) $8\square \times 7 = 5\square 1$

(c) $7\square \times 9 = 6\square 7$

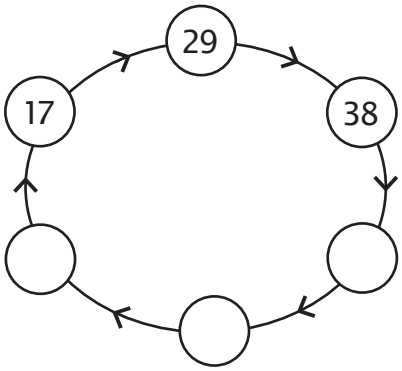
16. This is a number ring.
Start with any number.
Multiply the units digit by 4 and then add the tens digit.

e.g. 15 ⟶ $5 \times 4 + 1$

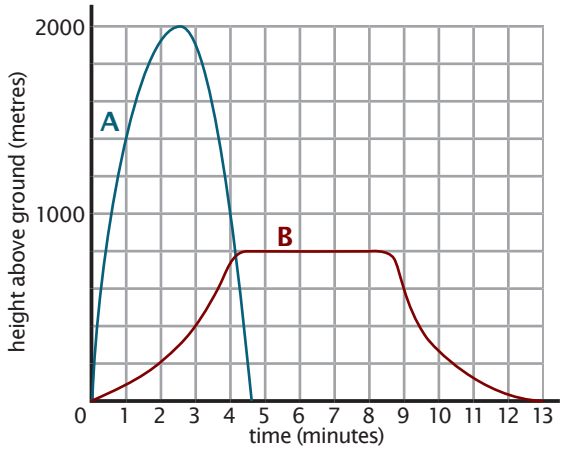
The rule is then repeated on 21 and so on.



Use the same rule to complete this number ring.



17. The graph shows the flights of objects A and B.



(a) Estimate the time at which they are at the same height.

(b) One of the objects is an aircraft and the other is a rocket.
Which graph do your think represents the flight of the aircraft? Give reasons for your answer.

18. Here is a number puzzle

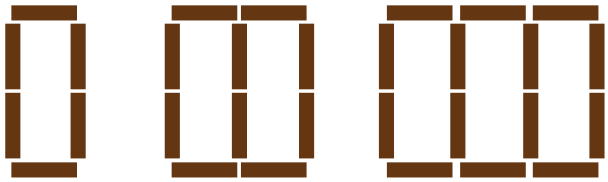
Find two numbers which add up to 9 and which make 17 when multiplied together.

First guess: $5 + 4 = 9$
$5 \times 4 = 20$ too big

Second guess: $6.5 + 2.5 = 9$
(use a calculator) $6.5 \times 2.5 = 16.25$ too small

Make two more guesses so that you get as close to 17 as you can.

19. Susie makes a pattern of rectangles from sticks.



Shape Number	**1**	**2**	**3**
Number of Sticks	6	10	14

Susie's rule is 'The number of sticks is four times the shape number and then add 2'.

(a) Work out the number of sticks in shape number 8.

(b) One of the shapes needs 50 sticks. What is its shape number?

(c) Write a formula, without words, to work out the number of sticks for any shape number.
Use S for the number of sticks and N for the shape number.

Write '$S =$

KS2 Practice Paper 1 Answers

1. (a) 18 (b) £1.50 (c) Prawn **2.** (a) Coke (b) 35p **3.** same number (28)

4. (a) 85p (b) £32.50 **5.** (a) (9,7) (b) (4,3) **6.** (a) + (b) - (c) -, +

7. About (a) 6 (b) 6 (c) 11 **8.** (a) -2 (b) 3

10. (a) $\begin{array}{r} 1\ 8\ 2 \\ 4\overline{)7\ 2\ 8} \end{array}$ (b) $\begin{array}{r} 2\ 9 \\ 3\overline{)8\ 7} \end{array}$ **11.** (a) 25 cm^2 b) 6 (c) shade 3 squares

12. (a) 24 (b) £107.80 **13.** (a) True (b) True (c) False

14. (a) $\frac{2}{4}$ (b) $\frac{2}{97}$ **15.** (a) £1.15 is about £1 so $8 \times$ £1 is only £8. (b) £9.20

16. (a) Possible (b) False (c) Possible **17.** (a) 34·4 km (b) 3 cm

KS2 Practice Paper 2 Answers

1. (a) 761 or 716 or 671 (b) 167 or 176 (c) 716 or 176

2. From top (clockwise) 2, 4, 3, 5, 1, 6.

4. (a) 14, 15 (b) 11, 12, 13 **5.** (a) 150 (b) 14 (c) 105 (d) 20

6. (a) 55p (b) £2.25 **7.** (a) About $\frac{1}{3}$ or $\frac{3}{8}$ or $\frac{2}{5}$ (b) About 30 (c) 18

8. (a) 2·35 m (b) 0·35 kg (c) 62 cm (d) 3300 g (e) 0·44 m (f) 2·7 cm

9. (a)

	A	**B**	**C**
Reflective symmetry	Yes	No	No
Rotational symmetry	Yes	No	Yes

10. (a) 31 (b) 4 (c) 5, 11, 23, 47 **11.** 7·1 cm

13. (a) (1, 4) (b) (3, 4) (c) (3, 3) **14.** 40 (i.e. 5 rows of 8)

15. A unlikely, B likely, D possible

16. (a) hot, dry (b) Wednesday (c) Thursday: cold, dry; Saturday: warm, dry

17. 6·5 cm → 6·8 cm **18.** 16

19.

	5	
4	15	6

N = a + b + c

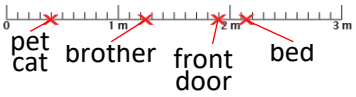
KS2 Practice Paper 3 Answers

1. (a) 57 (b) 175 (c) 32

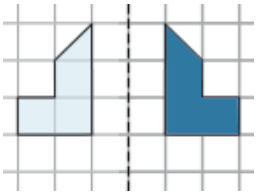
2. (a) 4950 cm² (b) 1980 cm²

4. £61

5.



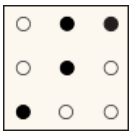
7.



8. (a) Yes (b) No

9. (a) x (b) x (c) ÷

10.



11. (a) 3 (b) 15 (c) 3

12. 23

13. (a) A, about 16; B, 0; C, 50

14. (a) Ian (b) Greg (c) Maya

15. (a) 76 (b) 83 x 7 = 581 (c) 73 x 9 = 657

16. 35 → 23 → 14

17. (a) About 4 minutes after take-off.

(b) B is aircraft as it flies at a constant height for a period. Accept any well-reasoned answer for A.

18. For example 6 x 3 = 18, 6·1 x 2·9 = 17·69 etc.

19. (a) 34 (b) 12 (c) $s = 4N + 2$