Assessment Test 1

The rest of the book contains four assessment tests to help you improve your maths skills. Each test is divided into two parts. Section A is the 'quick maths' section — the questions here are more straightforward but with less time available per question. Section B is the 'long maths' section, the questions are more complex, but there's more time to answer them.

For each test, allow 10 minutes to do Section A and 25 minutes to do Section B.

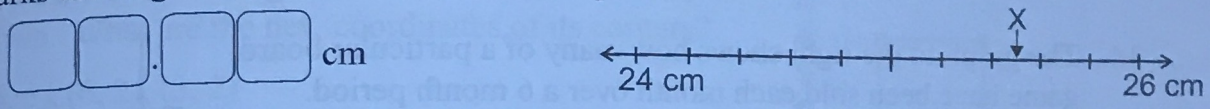
Work as quickly and as carefully as you can.

You can print **multiple-choice answer sheets** for these questions from our website — go to www.cgplearning.co.uk/11+. If you'd prefer to answer them in write-in format, either write your answers in the spaces provided or circle the **correct answer** from the options given.

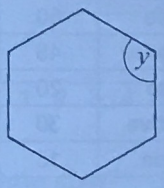
Section A — Quick Maths

You have **10 minutes** to complete this section.
There are **30 questions** in this section.

1. Rose measures the height in cm of a plant against the ruler to the right. She marks the height with an X. How tall is the plant?



2. Kylie has a mirror which is shaped like a regular hexagon, as shown to the right. What is the size of angle y?

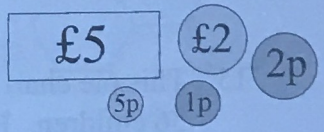


A 180° **B** 60° **C** 120° **D** 90° **E** 175°

3. Jeff thinks of a number which can be expressed as $6 \times 2 + 12$. Which of the following expressions gives the same answer?

A $48 - 8 \times 3$ **B** $3 + 11 \times 2$ **C** 3×7 **D** $24 \div 2 - 1$ **E** $2 + 4 \times 4$

4. James saves the following notes and coins from his pocket money. How much has he saved altogether?



£

5. Which of the following shapes could only go in the region labelled X?

A rhombus
B kite
C regular pentagon
D scalene triangle
E isosceles triangle

	At least two angles equal	All angles different
At least two sides equal		
All sides different lengths		X

6. A bag of fruit costs 99p. How much will 9 bags of fruit cost?

£

7. What is 45.952 rounded to the nearest tenth?

A 45.9 **B** 46.0 **C** 45.95 **D** 45.96 **E** 45.10

8. Chris has a dentist appointment at ten to five in the afternoon. What is the time of his appointment on the 24-hour clock?

Carry on to the next question →→

9. Bethany cuts her birthday cake into 20 equal slices. She gives out 16 slices to her friends. What fraction of the cake does Bethany have left?

A $\frac{1}{5}$ **B** $\frac{1}{4}$ **C** $\frac{2}{5}$ **D** $\frac{1}{8}$ **E** $\frac{3}{5}$

10. Anna has a book with 1897 pages. Round the number of pages to the nearest ten. ☐☐☐☐

11. An engineer charges a customer £50 for every job and £25 for every hour that he works. Which formula could you use to find how much he charges in pounds, C, for h hours of work?

A $C = 50 \div 25h$ **B** $C = 50 + 25h$ **C** $C = 50h - 25$ **D** $C = 25 + 50h$ **E** $C = 50h$

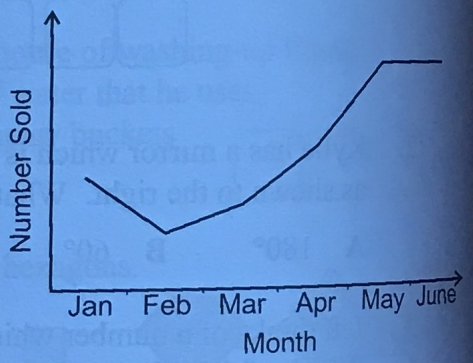
12. 24 children want to go camping. 5 children can sleep in each tent. How many tents do they need? ☐☐

13. What is the missing number in this equation?

$2808 + 2808 + 2808 = \square \times 6$ ☐☐☐☐

14. The graph to the right shows how many of a particular board game have been sold each month over a 6 month period.

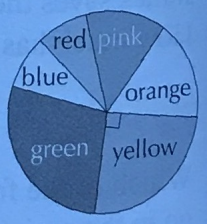
	Jan	Feb	Mar	Apr	May	June
Ant Alliance	50	25	10	5	20	45
Bee Bash	45	40	35	30	20	20
Croc Chase	20	10	15	25	40	40
Dodo Detective	30	35	30	35	30	30
Emu Escape	15	20	25	30	40	40



Using the information in the table, which of the games could the graph correspond to?

A Ant Alliance **B** Bee Bash **C** Croc Chase **D** Dodo Detective **E** Emu Escape

15. This pie chart shows the colours of the sun hats worn by 36 children. Find the number of children wearing yellow hats.



☐☐

16. Johnny has a ten pound note. He spends £8.93. How much does he have left?

£☐☐.☐☐

17. Year 5 and Year 6 are split into red, yellow and blue teams. The number of points won by each team are shown in the table. How many points did the blue team win in total?

Team	Year 5	Year 6	Total
Red	27	50	77
Yellow	32	25	57
Blue		30	
Total	90	105	

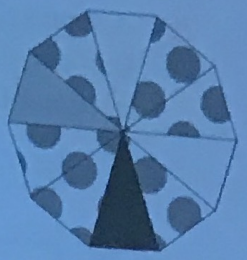
☐☐☐

18. A packet of 6 Milky Bears normally costs 40p. They are on special offer at 10% off. What is the cost of one milky bear?

☐☐p

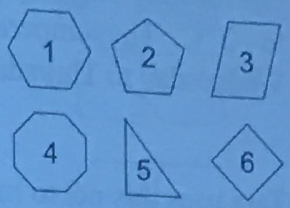
Carry on to the next question →→

19. Which of the following statements about the segments of this spinner is correct?



A More of the spinner is shaded black than grey.
B The ratio of spotty segments to white segments is 2 : 1.
C ½ the spinner is shaded with a spotty pattern.
D For every white segment there are three spotty segments.
E 20% of the segments are black.

20. Which two shapes on the right both have at least one right angle?



A 1 and 2
B 3 and 5
C 1 and 6
D 5 and 6
E 2 and 4

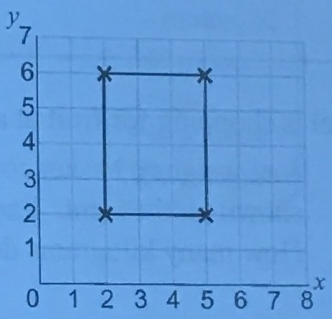
21. Laura gained the following marks in her exams.

47 55 42 41 58 63 62 73

Which scores are prime numbers?

A 47, 41, 63 and 73
B 47, 58 and 62
C 47, 55, 41 and 73
D 47, 41 and 73
E 42, 58 and 62

22. The rectangle on the coordinate grid is moved 3 units to the right and 2 units down. What are the new coordinates of its corners?



A (3, 6), (6, 6), (6, 2), (3, 2)
B (6, 3), (6, 6), (2, 6), (2, 3)
C (5, 6), (8, 6), (8, 2), (5, 2)
D (5, 4), (8, 4), (8, 0), (5, 0)
E (4, 3), (4, 7), (7, 7), (7, 3)

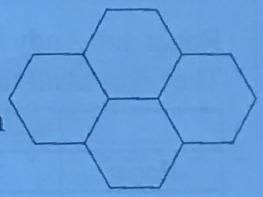
23. Here are the shoe sizes of seven children at a party. What is the mean shoe size?

6 6 7 5 7 6 5

☐

24. This honeycomb pattern is made up of regular hexagons.
The length of each side of the hexagons is 2 cm.
Calculate the distance around the outer edge of this pattern.

☐☐ cm



25. The table shows part of the information written on a tin of fruit. Amrit eats ¾ of the tin of fruit. How many grams of carbohydrate did Amrit eat?

☐☐.☐☐ g

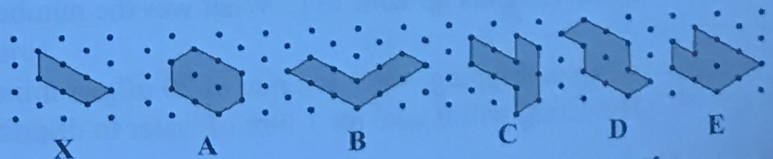
	Per ¼ tin
Protein	0.4 g
Carbohydrate	12.2 g
Fat	0.1 g
Fibre	1.2 g

26. A train timetable is shown to the right.
If Cara catches the first available train after 9:00 am from Chapel Street, what time should she arrive in Lanston?

☐☐:☐☐

Colwyn Gardens	08:50	09:10	09:30
Chapel Street	08:55	09:15	09:35
Bispham	09:06	09:26	09:46
Torsway	09:17	09:37	09:57
Lanston	09:45	10:05	10:25

27. Robert has two identical tiles. One is shown, marked X. He arranges the tiles on a grid. Circle the shape that cannot be made without overlapping the tiles.



Carry on to the next question →→

28. A shop sells a different pie and a different dessert each weekday. Dan only likes meat pies. He hates apple desserts. On what fraction of the days will he like both the pie and dessert on offer?

A $\frac{2}{5}$ B $\frac{3}{5}$ C $\frac{5}{2}$ D $\frac{1}{2}$ E $\frac{5}{3}$

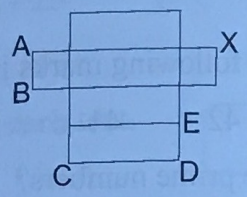
	Pie	Dessert
Monday	beef	lemon cake
Tuesday	mushroom	apple crumble
Wednesday	chicken	apple pie
Thursday	cheese	trifle
Friday	lamb	carrot cake

29. On Tuesday the temperature is 1 °C. By Wednesday it has dropped to –2 °C. The temperature drops by twice as much from Wednesday to Thursday. What is the temperature on Thursday?

– ☐☐ °C

30. Tara uses this net to make a 3D shape. Which corner will touch the corner marked X when the net is folded?

A B C D E



/ 30

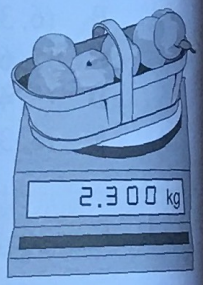
Section B — Long Maths

You have **25 minutes** to complete this section.
There are **30 questions** in this section.

Joel is shopping for fruit at a greengrocers.

1. Joel weighs a basket containing 7 peaches, as shown on the right. Each peach weighs 200 g. How many kilograms does the basket weigh?

☐☐.☐☐ kg



2. Joel exchanges three of the peaches for three apples. Each apple weighs ¾ the weight of one peach. What is the new weight of the basket and its contents?

☐☐.☐☐ kg

Roger and Andy take part in a long jump competition. They have six jumps each. They record all their jumps in metres in the table below.

	1	2	3	4	5	6
Roger	5.30	4.75	4.75	5.10	5.05	4.70
Andy	5.25	5.00	4.90	4.95	4.80	5.10

3. What is the difference between Andy's longest jump and his shortest jump?

☐☐.☐☐ m

4. Which distance did Roger jump most often?

☐☐.☐☐ m

5. What is Andy's mean distance?

☐☐.☐☐ m

6. How much further was Roger's longest jump than Andy's?

☐☐.☐☐ m

7. Adam thinks of a number. He multiplies it by 8, adds 6 and then divides by 2. He ends up with 131. What was the number he started with?

☐☐☐.☐

8. A tap is dripping water at a rate of 20 ml per minute. How long will it take for 1 litre of water to drip from the tap?

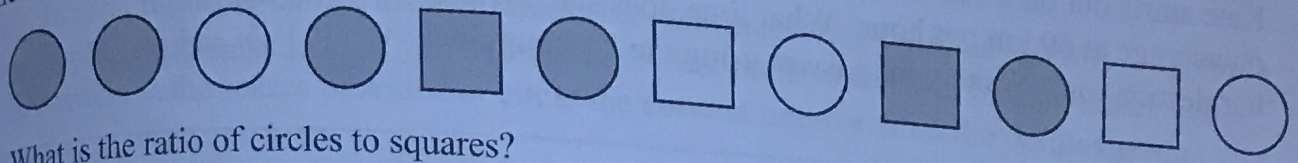
☐☐ minutes

Carry on to the next question →→

9. Jane works for a shoe shop and is given a discount card. Jane uses her card to buy a pair of trainers for £24.75. The trainers originally cost £27.50. What percentage discount does she receive?

☐☐ %

Jamie has a collection of the following shapes.



10. What is the ratio of circles to squares?
Express the ratio in its simplest form.

☐:☐

11. What is the ratio of grey squares to white squares?
Express the ratio in its simplest form.

☐:☐

12. What fraction of the shapes are white circles?

A $\frac{3}{4}$ **B** $\frac{4}{5}$ **C** $\frac{1}{4}$ **D** $\frac{1}{2}$ **E** $\frac{1}{5}$

Eve is baking cupcakes using the ingredients on the right.

13. Eve needs to make exactly 40 cakes.
How much butter, in grams, will she need?

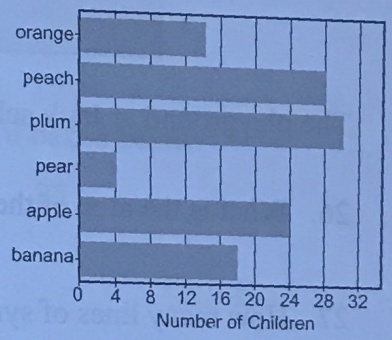
☐☐☐☐ g

Cupcakes — makes 12
240 g flour
3 eggs
150 g butter
150 g sugar

14. Eve has 1.4 kg of flour. If she uses all of the flour, and assuming she has enough of the other ingredients, what is the largest number of cupcakes she could make?

☐☐☐

Each child in Ella's year group was asked to pick their favourite fruit. The results were collected in a bar chart.



15. How many more children chose plum than chose pear?

☐☐

16. Which fruit is half as popular as pear and apple combined?

A Orange **B** Peach **C** Plum **D** Banana

17. A shop has an offer on greetings cards. You can buy 3 boxes of 20 cards for the price of 2 boxes. A box costs £3.90. Bella buys 6 boxes in the offer. She also buys a box of 12 envelopes for £1.80.
How much does she spend in total?

£☐☐.☐☐

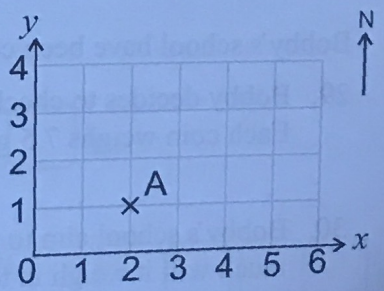
Kaye follows a route from point A on the grid.

18. She walks 1 square north then 2 squares east.
What are the coordinates of the point her route takes her to?

(☐,☐)

19. From her new position, Kaye walks 2 squares south and three squares west. What are the coordinates of the point her route takes her to?

(☐,☐)



Carry on to the next question →→

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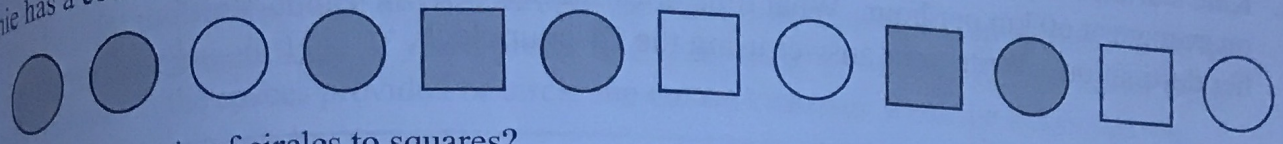

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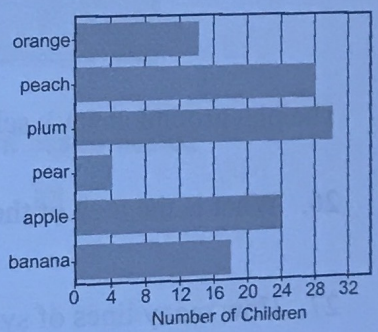

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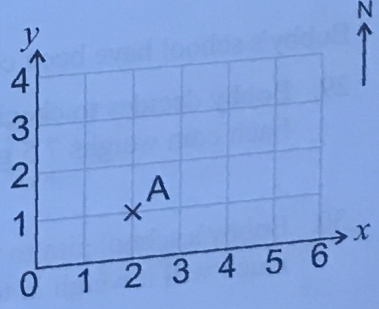

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(☐,☐)

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(☐,☐)

Carry on to the next question →→

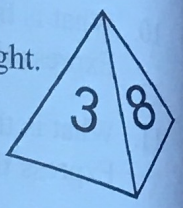
20. Amanda has some pocket money. She spends 60% of it and is left with £6.00. How much money did she start off with?

£ ☐☐.☐☐

21. Kate starts out on a 135 km journey at 8:50 am. She travels on average at 60 km per hour. What time does she arrive at her destination? Write your answer using the 24-hour clock.

☐☐:☐☐

22. A number is written on each face of the triangular-based pyramid shown on the right. The mean of the numbers is 4. Which of these could be the two hidden numbers?



A 2 and 4 **B** 1 and 2 **C** 2 and 5 **D** 1 and 5 **E** 1 and 4

23. Toby has 4.4 litres of lemonade, 900 millilitres of lime juice and 2.8 litres of orange juice. He mixes them together in a bucket. How many litres of liquid is in the bucket?

☐☐.☐☐ litres

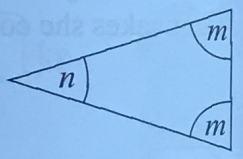
24. Juliet is converting her exam results into percentages from fractions. She scored $^{17}/_{20}$ in her English test. What is this as a percentage?

☐☐ %

25. Use the formula below to find the size of angle m if $n = 46°$.

$m = (180 - n) \div 2$

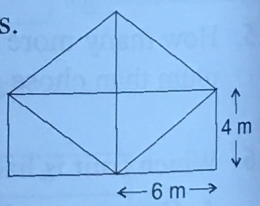
$m =$ ☐☐☐ °



The playground at Jay's school is made up of six identical right-angled triangles.

26. What is the area of the playground?

☐☐☐ m^2

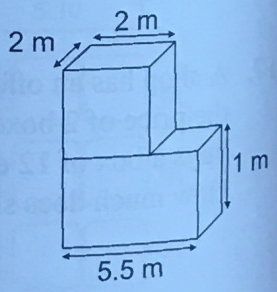


27. How many lines of symmetry does the playground have?

☐☐

28. Jay's school are building this climbing frame on the playground. The frame is built of a wooden cube on top of a cuboid. What is the total volume of the frame?

☐☐.☐☐ m^3



Bobby's school have been collecting 2p coins for charity. They count the coins into £1 piles.

29. Bobby decides to check the £1 piles are correct by weighing them. Each coin weighs 7.5 g. How many grams should each pile weigh?

☐☐☐.☐ g

30. Bobby's school aim to raise £200. If they achieve their target, how much will it weigh in total, in kg, if all money raised is in 2p coins?

☐☐.☐☐ kg

/ 30