Sample 11+ Assessment Test — Maths

Allow 50 minutes to do this test. Work as quickly and as carefully as you can.

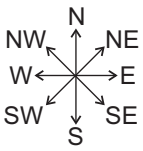
If you want to answer these questions in multiple-choice format, use the separate multiple-choice answer sheet. If you'd prefer to answer them in standard write-in format, either write your answers in the spaces provided or circle the correct answer from the options **A** to **E**.

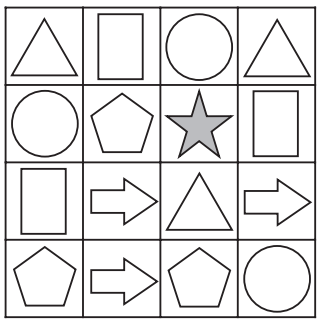
1. Which of the following is the most likely weight of a bag of flour?

   A 2 g **B** 2 litres **C** 2000 kg **D** 200 mm **E** 2 kg

2. Look at the grid on the right.
   Molly starts at the star. She moves 2 squares south-west, 2 squares north and one square east.

   What shape will she arrive at?

   A rectangle **C** pentagon **E** triangle
   B arrow **D** circle

3. Look at the bus timetable on the right.
   Jemima lives on Hart Street. She wants to arrive at Maple Lane before 10:15.

   What time should she catch the bus from Hart Street?

   Answer: _____:_____

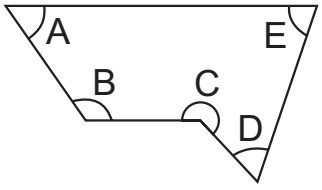
Hart Street	8:30	9:10	9:50	10:30	11:10
Warwick Street	8:47	9:27	10:07	10:47	11:27
Maple Lane	—	9:39	—	10:59	—
Harbour Road	9:08	9:48	10:28	11:08	10:48

4. How many thirds are there in 9?

   A 3 **B** 18 **C** 9 **D** 27 **E** 30

5. Look at the shape on the right.

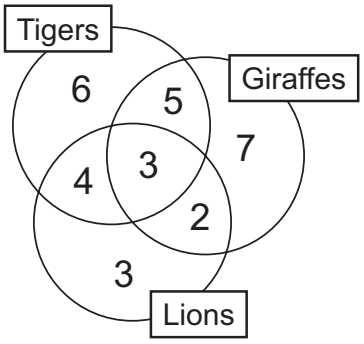
   Which angle is obtuse?

   A **B** **C** **D** **E**

6. A class of Year 6 children were asked whether they liked tigers, giraffes or lions. The Venn diagram shows their answers.

   How many children said they liked both tigers and giraffes, but not lions?

   A 6 **C** 5 **E** 3
   B 2 **D** 7

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Carry on to the next question →→

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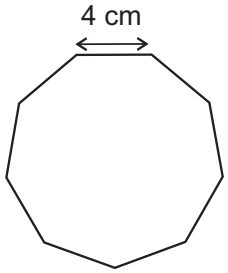
7. Which of these numbers is the smallest?

A 0.7 **C** 7.7 **E** 7.07
B 0.77 **D** 77.0

8. The length of each side of this shape is 4 cm.

What is the perimeter of the shape?

Answer: _____ cm



9. Forty-seven thousand, nine hundred and eighty-three people went to a football match.

What is this number rounded to the nearest thousand?

A 47 000 **C** 100 000 **E** 47 900
B 50 000 **D** 48 000

10. There are 25 CDs in a box. A shop orders 14 boxes.

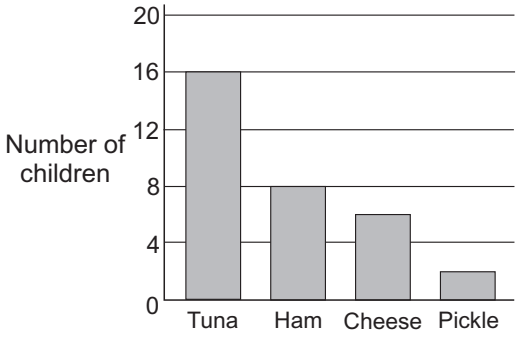
How many CDs did the shop order?

Answer: _____

11. A class of children were asked what their favourite sandwich filling is. The results are shown by this bar chart. 25% of children said they liked ham.

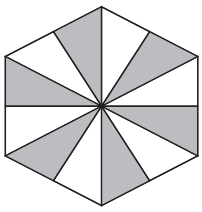
What percentage chose tuna?

Answer: _____ %



12. What fraction of this shape is shaded?

A $\frac{2}{3}$ **C** $\frac{7}{12}$ **E** $\frac{1}{2}$
B $\frac{3}{5}$ **D** $\frac{3}{4}$



13. Which of the following statements is correct?

A $5.2 \times 10 < 52$ **C** $52 > 520 \div 100$ **E** $52 \times 10 < 52$
B $52 > 5200$ **D** $520 < 52$

14. A factory makes 4596 nails in a week. 2914 of the nails are sold.

How many nails are left over?

Answer: _____

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Carry on to the next question →→

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15. Ibrahim is trying to work out the volume of a swimming pool.

What units should he measure the volume in?

A mm^3 **B** m^2 **C** cm^2 **D** m^3 **E** cm^3

16. Sunita has 75 pens and she ties them into bundles of 8.

How many pens does she have left over?

Answer: _____

17. What is 21.7×9.4?

A 287.68 **C** 117.24 **E** 412.96

B 532.42 **D** 203.98

18. Which three numbers can go in the shaded box of the table?

A 1, 2, 5 **D** 5, 7, 11

B 2, 5, 7 **E** 5, 7, 10

C 7, 14, 35

	factors of 55	factors of 70
<10	1, 5	1, 2, 5, 7
Prime	5, 11	

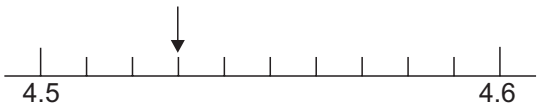
19. What is $\frac{3}{5}$ of 60?

A 30 **B** 24 **C** 40 **D** 32 **E** 36

20. What number is the arrow pointing at?

A 4.55 **C** 4.53 **E** 4.5

B 4.3 **D** 4.45

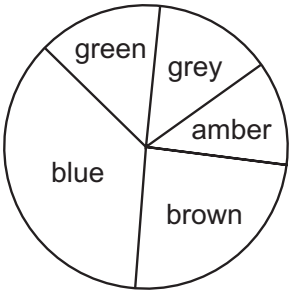


21. Marvin made a pie chart to show the eye colours of the children in his class.

What is the modal eye colour?

A green **C** grey **E** brown

B blue **D** amber



22. Which of these calculations gives the largest amount?

A $21 \times 20 - 18 + 19$ **C** $20 \times 18 - 19 + 21$ **E** $20 \times 19 - 21 + 18$

B $18 \times 19 - 21 + 20$ **D** $21 \times 18 - 20 + 19$

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Carry on to the next question →→

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23. Mark buys a scarf, two badges and a whistle from a sports shop.

How much change does he receive from £20.00?

A £12.04 **B** £12.96 **C** £11.04 **D** £11.96 **E** £11.00

scarf	£3.99
football	£5.99
whistle	£1.99
badge	99p
trophy	£2.99

24. Winston is packing eggs into egg boxes. He puts 6 eggs into each egg box.

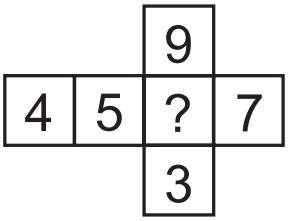
How many complete egg boxes can he fill with 106 eggs?

Answer: _____

25. When this net is folded into a cube the opposite faces of the cube add up to 12.

What is the missing number?

Answer: _____



26. What is the next number in this sequence?

23 35 47 59 ?

Answer: _____

27. $622 \times 110 = 68\,420$

What is 55×622?

A 34 210 **B** 11 405 **C** 31 605 **D** 13 704 **E** 34 420

28. Ashley measured the height of his garage door. It was 2.345 m tall.

What is 2.345 m rounded to the nearest 10 cm?

A 2.4 m **B** 2.35 m **C** 2.3 m **D** 2.34 m **E** 3 m

29. The average temperature in May is 18 ºC.
The average temperature in November is a third of the average temperature in May.
The average temperature in September is twice the average temperature in November.

What is the average temperature in September?

Answer: _____°C

30. Shania has 3 pieces of wool to make a bracelet. One piece is 160 mm long, another piece is 26 cm long and the last piece is 0.45 m long.

What is the total length of wool, in centimetres, that Shania has?

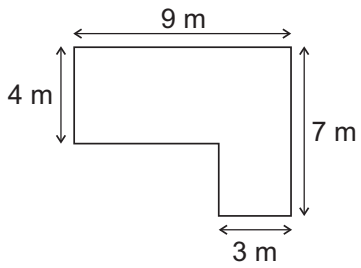
Answer: _____ cm

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Carry on to the next question →→

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31. The diagram shows the plan of Ridzuan's living room.



What is the area of the living room?

Answer: _____ m²

32. What is the sum of the factors of 21?

A 21 **B** 7 **C** 42 **D** 32 **E** 11

33. Chris weighs 74.2 kg, Carrie weighs 67.8 kg and Colleen weighs 69.4 kg.

What is the range of their weights?

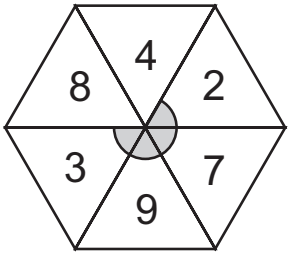
Answer: _____ kg

34. Shane has 15 cards. 3 of Shane's cards are aces. Liz takes a card at random from Shane.

What is the probability that Liz takes an ace?

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

35. This spinner is made of 6 equilateral triangles.



What is the size of the shaded angle shown?

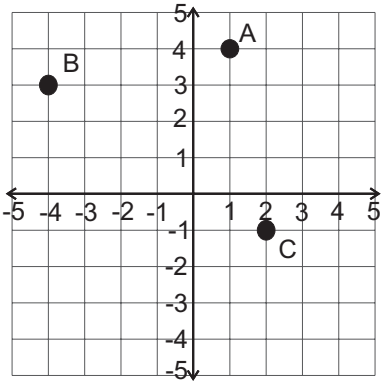
Answer: _____ °

36. Sandra is building a model boat. She uses 54 pieces of wood which weigh 20 g each.

What is the total weight, in kilograms, of the wood used in the model boat?

Answer: _____ kg

37. A, B and C are three corners of a square.



What are the coordinates of the 4th corner?

Answer: (___ , ___)

38. Which of the following statements is true?

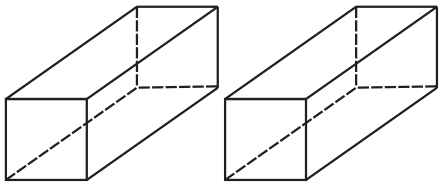
A Most prime numbers end in 5.
B 2 is not a prime number.
C Prime numbers only have one factor.
D The sum of the first 3 prime numbers is 10.
E All prime numbers are odd.

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Carry on to the next question →→

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39. Both of these cuboids are identical. Each of their square ends has an area of 4 cm² and they are both 15 cm long.



What is the total volume of these two cuboids combined?

A 240 cm³ **C** 120 cm³ **E** 30 cm³

B 480 cm³ **D** 60 cm³

40. Mary keeps some animals on her farm.
She has 12 sheep, 16 cows, 24 chickens and 6 pigs.
Mary sells 8 of her sheep.

What percentage of her remaining animals are sheep?

Answer: _____ %

41. The table shows the highest temperature in Milford each day for a week.

Monday	12 °C
Tuesday	11 °C
Wednesday	9 °C
Thursday	10 °C
Friday	8 °C
Saturday	7 °C
Sunday	6 °C

What is the mean of these temperatures?

A 10 °C **C** 6 °C **E** 7 °C

B 9 °C **D** 12 °C

42. Five scones cost £2.85 and three teas cost £1.80.

What is the total cost of one scone and one tea?

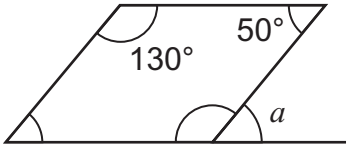
Answer: £ _____

43. A bucket holds 5 litres of water.
250 ml of water is drained from the bucket every minute.

How many minutes will it take for the bucket to be empty?

Answer: _____ minutes

44. What is the size of angle *a*? Answer: _____ °



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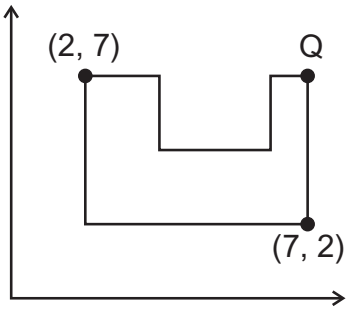
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45. Craig has 4 dogs. He has to buy each dog a collar (c) and six tins (t) of dog food.

Which expression shows how many collars and tins of food he needs to buy?

A $4tc$ **C** $4c + 4t$ **E** $4 + c + t$
B $c + 4t$ **D** $4(c + 6t)$



46. What are the coordinates of Point Q?

A (3, 7) **C** (2, 9) **E** (2, 7)
B (7, 9) **D** (7, 7)

47. Cliff has a bag of tennis balls. 8 are green, 7 are yellow and 5 are white. He picks a tennis ball at random.

What is the probability that he picks one that is not green?

A $\frac{3}{5}$ **B** $\frac{2}{10}$ **C** $\frac{8}{20}$ **D** $\frac{3}{4}$ **E** $\frac{5}{8}$

48. Jodie works for a bookshop. She is paid £6.50 an hour plus 5% of the cost of each book she sells. On Saturday, Jodie worked for 3 hours and sold £220 worth of books.

How much money did Jodie earn?

Answer: £ _____

49. The cost of travel insurance in pounds (C) is worked out using the equation below:

$$C = 10 + 20(x - 1)$$

x is the number of weeks that a customer is travelling for.
A customer wants travel insurance for 6 weeks.

How much should the customer be charged?

Answer: £ _____

50. Look at the sequence below:

4 9 16 25 36

Which expression could be used to find the nth term in this sequence?

A n^2 **C** $n^2 - 3$ **E** $(n + 1)^2$
B $n^2 + 3$ **D** $2n + 2$

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