

# Sample 11+ Assessment Test – Maths

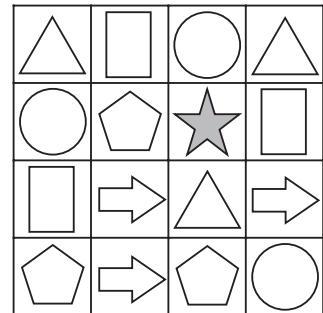
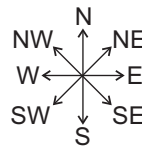
Allow 50 minutes to do this test. Work as quickly and as carefully as you can.

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.

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

What time should she catch the bus from Hart Street?

Answer: \_\_\_\_\_ :

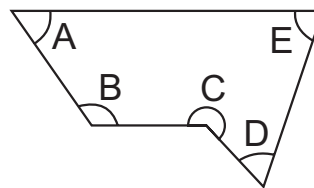
4. How many thirds are there in 9?

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

5. Look at the shape on the right.

Which angle is obtuse?

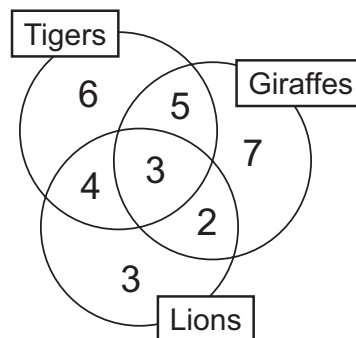
- A**      **B**      **C**      **D**      **E**



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



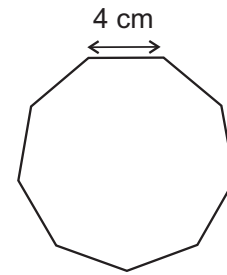
7. Which of these numbers is the smallest?

- 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.

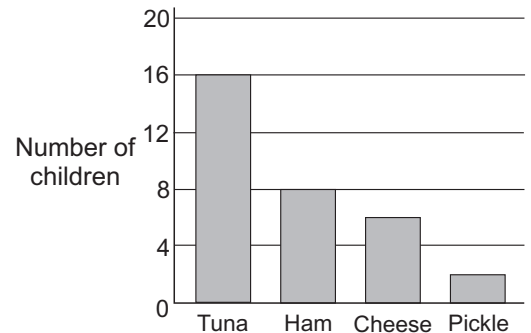
How many CDs did the shop order?

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.

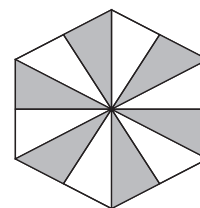
What percentage chose tuna?

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: \_\_\_\_\_

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

What units should he measure the volume in?

- A mm<sup>3</sup>      B m<sup>2</sup>      C cm<sup>2</sup>      D m<sup>3</sup>      E cm<sup>3</sup>

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  $21.7 \times 9.4$ ?

- 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?

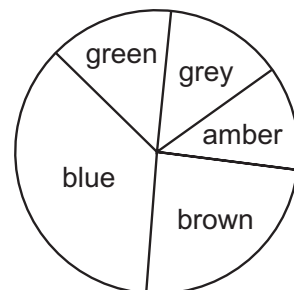
- A 4.55      C 4.53      E 4.5  
B 4.3      D 4.45



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  $21 \times 18 - 20 + 19$

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      C £11.04      E £11.00  
B £12.96      D £11.96

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

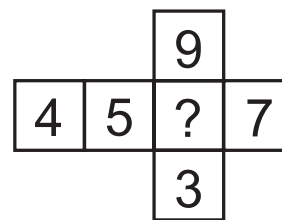
24. Winston is packing eggs into egg boxes. He puts 6 eggs into each egg box.

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  $55 \times 622$ ?

- 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  $18^\circ\text{C}$ .

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: \_\_\_\_\_ $^\circ\text{C}$

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

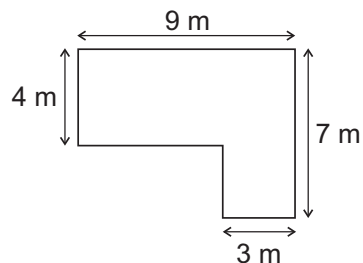
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Carry on to the next question → →

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

What is the area of the living room?

Answer: \_\_\_\_\_ m<sup>2</sup>



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.

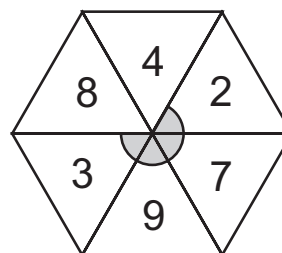
What is the probability that Liz takes an ace?

- 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.

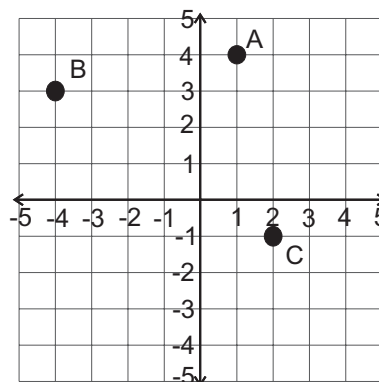
What is the total weight, in kilograms, of the wood used in the model boat?

Answer: \_\_\_\_\_ kg

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

What are the coordinates of the 4th corner?

Answer: ( \_\_\_\_\_ , \_\_\_\_\_ )



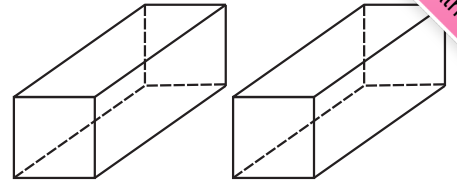
38. Which of the following statements is true?

- 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.

39. Both of these cuboids are identical. Each of their square ends has an area of  $4 \text{ cm}^2$  and they are both  $15 \text{ cm}$  long.

What is the total volume of these two cuboids combined?

- A  $240 \text{ cm}^3$       C  $120 \text{ cm}^3$       E  $30 \text{ cm}^3$   
B  $480 \text{ cm}^3$       D  $60 \text{ cm}^3$



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.

What is the mean of these temperatures?

- A  $10 \text{ }^\circ\text{C}$       C  $6 \text{ }^\circ\text{C}$       E  $7 \text{ }^\circ\text{C}$   
B  $9 \text{ }^\circ\text{C}$       D  $12 \text{ }^\circ\text{C}$

<b>Monday</b>	$12 \text{ }^\circ\text{C}$
<b>Tuesday</b>	$11 \text{ }^\circ\text{C}$
<b>Wednesday</b>	$9 \text{ }^\circ\text{C}$
<b>Thursday</b>	$10 \text{ }^\circ\text{C}$
<b>Friday</b>	$8 \text{ }^\circ\text{C}$
<b>Saturday</b>	$7 \text{ }^\circ\text{C}$
<b>Sunday</b>	$6 \text{ }^\circ\text{C}$

42. Five scones cost  $\text{£}2.85$  and three teas cost  $\text{£}1.80$ .

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

Answer:  $\text{£}$  \_\_\_\_\_

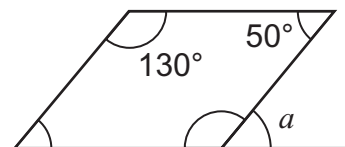
43. A bucket holds 5 litres of water.  
 $250 \text{ ml}$  of water is drained from the bucket every minute.

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

Answer: \_\_\_\_\_ minutes

44. What is the size of angle  $a$ ?

Answer: \_\_\_\_\_  $^\circ$



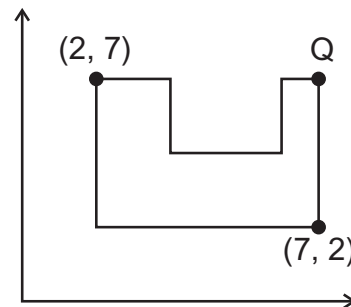
45. Craig has 4 dogs. He has to buy each dog a collar ( $c$ ) and six tins ( $t$ ) of dog food.

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  $n$ th term in this sequence?

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