# Sample 11+ Assessment Test — Maths

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

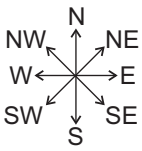
If you want to answer these questions in multiple-choice format, use the separate multiple-choice answer sheet. If you'd prefer to answer them in standard write-in format, either write your answers in the spaces provided or circle the correct answer from the options **A** to **E**.

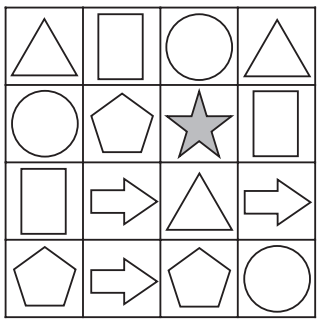
1. Which of the following is the most likely weight of a bag of flour?

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

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?

| | | | | | |
|---|---|---|---|---|---|
| **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 |

   Answer: _____:_____

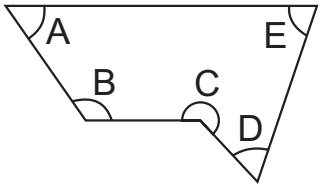
4. How many thirds are there in 9?

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

5. Look at the shape on the right.

   Which angle is obtuse?

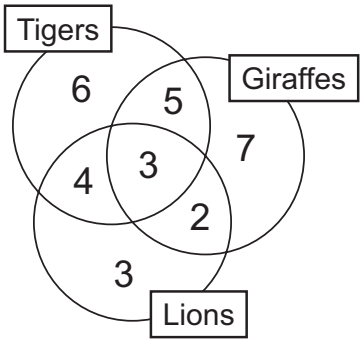
   **A** **B** **C** **D** **E**


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


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***Carry on to the next question →→***

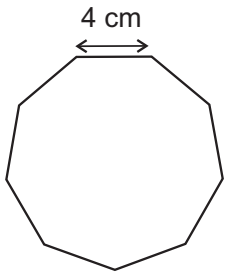
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7. Which of these numbers is the smallest?

**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

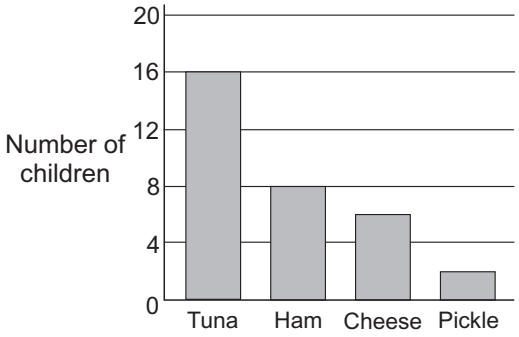
10. There are 25 CDs in a box. A shop orders 14 boxes.

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.

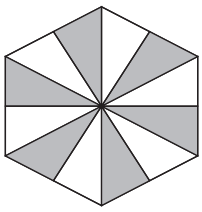
What percentage chose tuna?




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 $21.7 \times 9.4$?

**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 | |

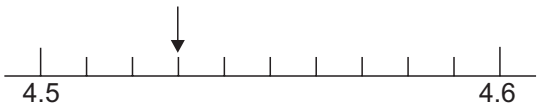
19. What is $\frac{3}{5}$ of 60?

**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

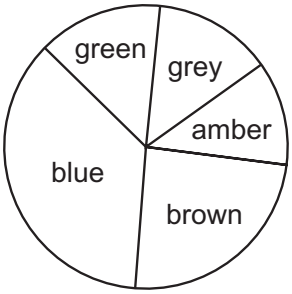



21. Marvin made a pie chart to show the eye colours of the children in his class.

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

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***Carry on to the next question →→***

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.

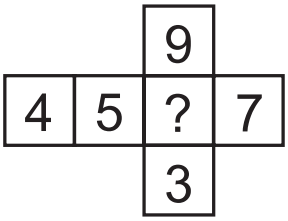
How many complete egg boxes can he fill with 106 eggs?

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 $55 \times 622$?

**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 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?

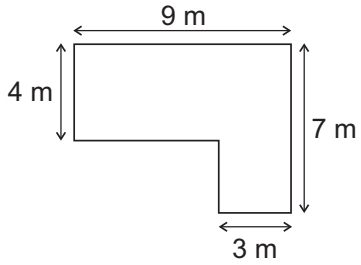
Answer: _____ cm

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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?

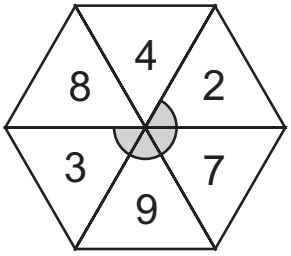
Answer: _____ kg

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?

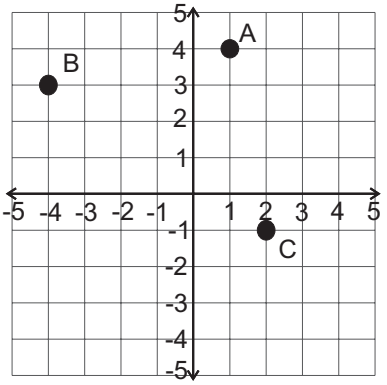
Answer: _____ °

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: ( ___ , ___ )

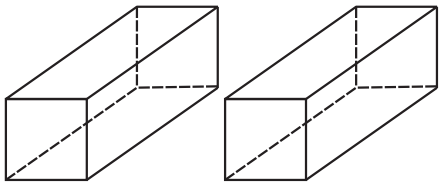
38. Which of the following statements is true?

**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 →→***

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?

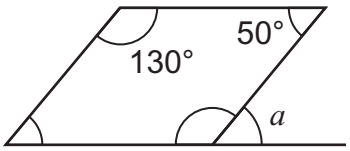
Answer: £ _____

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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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?

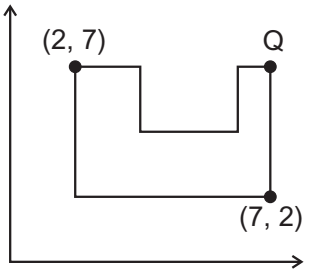
**A** $4tc$ **C** $4c + 4t$ **E** $4 + c + t$

**B** $c + 4t$ **D** $4(c + 6t)$

***Carry on to the next question →→***

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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** $2n + 2$

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