

PiAcademy

11+ Mathematics GL Style - Pack 3 Test Paper - 11

Instructions:

1. The time allowed is 50 minutes for 50 questions
2. This is a multiple-choice test and each question carries 1 Mark.
3. Answers should be clearly marked in pencil on the provided answer sheet.
4. Do not turn over the booklet until you are told to do so.
5. No Marks are lost for an incorrect answer.
6. If you have marked the wrong answer, erase it and mark the new one. Make sure that your final answer is clear.

Symbols used:



Go to the next page.

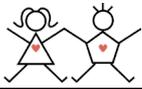


Do not turn the page until told to do so.



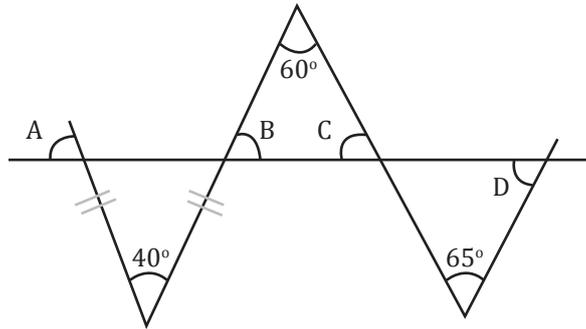
Stop working and await instructions.

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1

The diagram shows three different triangles with their bases passing through the same straight line. Find the sum of the angles A, B, C and D.



- [A] 240° [B] 255° [C] 360° [D] 180° [E] 300°

2

When the 100 digit number **1000...0000** is divided by 9, what will be the remainder?

- [A] 1 [B] 2 [C] 3 [D] 4 [E] 5

3

Observe the following terms and arrange them starting with the smallest and ending with largest.

$$4.2, \frac{9}{2}, \frac{419}{100}, \frac{8}{3}, 4\frac{8}{9}$$

[A] $4.2, \frac{9}{2}, \frac{419}{100}, \frac{8}{3}, 4\frac{8}{9}$ [B] $\frac{9}{2}, 4.2, \frac{419}{100}, \frac{8}{3}, 4\frac{8}{9}$ [C] $4\frac{8}{9}, \frac{9}{2}, 4.2, \frac{419}{100}, \frac{8}{3}$

[D] $\frac{8}{3}, \frac{419}{100}, 4.2, \frac{9}{2}, 4\frac{8}{9}$ [E] $\frac{8}{3}, \frac{9}{2}, \frac{419}{100}, 4.2, 4\frac{8}{9}$





4

What is the 7th number in sequence 7, 15, 31, 55, 87.....

- [A] 135 [B] 125 [C] 175 [D] 115 [E] 95

5

Jonathan buys $5\frac{1}{4}$ kg of chicken and $\frac{3}{2}$ kg of onions. What is the difference between the weights of the chicken and the onions?

- [A] $3\frac{3}{4}$ kg [B] $4\frac{3}{4}$ kg [C] $5\frac{5}{4}$ kg [D] $6\frac{5}{4}$ kg [E] $2\frac{5}{4}$ kg

6

One foot can be approximated as 0.3 metres. How many millimetres are there approximately in 12 feet?

- [A] 3000 mm [B] 3600 mm [C] 360 mm [D] 1200 mm [E] 30 mm

7

The heights of Mr Green's family are given below.

Chris Green (Father) = x feet

Olive Green (Mother) = x - 1 feet

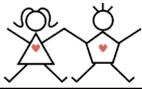
Billy Green (Son) = x - 2 feet

Barbara Green (Daughter) = x - 3 feet

If the average height of the Green family is 5 feet, what is the height of Billy Green?

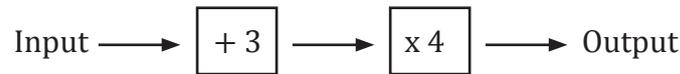
- [A] 4.5 feet [B] 6.5 feet [C] 5.5 feet
[D] 6 feet [E] 5 feet





8

Alex has a machine which adds 3 and multiplies by 4.



If Alex inputs 5 and 6, what will be the outputs respectively?

[A] 27 and 32 [B] 32 and 27 [C] 36 and 32 [D] 32 and 36 [E] 27 and 36

9

There are 4 ash saplings, 3 oak saplings and 5 beech saplings in a flower nursery. John goes to the nursery to buy a sapling. He chooses a sapling at random. What is the probability that John buys a oak sapling?

[A] $\frac{1}{6}$ [B] $\frac{5}{12}$ [C] $\frac{1}{4}$ [D] $\frac{1}{12}$ [E] $\frac{5}{6}$

10

Janice has a ribbon of length 'x' metres which she cuts into 10 equal pieces. She takes one piece from it and joins a 30 mm ribbon to it.

What is the length of this piece after joining?

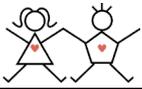
[A] $(10x + 0.3)$ m [B] $(x + 0.3)$ mm [C] $(0.1x + 0.3)$ m
[D] $(100x + 30)$ mm [E] $(100x + 30)$ m

11

Write the number four hundred thousand and fifty six in figures.

[A] 405600 [B] 400056 [C] 400560
[D] 456000 [E] 405060





12

Ben and Jimmy are partners in the fruit selling business. One day, they made a total of £125 and shared the money in the ratio 12:13. Ben gave 20% of his share to his wife and kept the rest for himself.

How much did Ben keep for himself?

- [A] £60 [B] £65 [C] £48 [D] £20 [E] £12

13

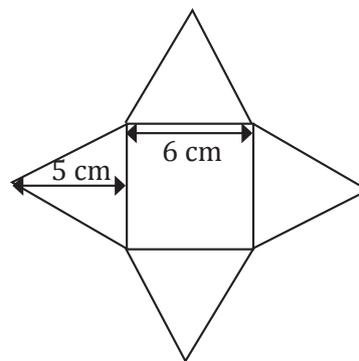
Forty students donate three sets of clothes each to an organisation. The organisation decides to share the total number of clothes equally between eight relief camps.

How many sets of clothes will each relief camp get?

- [A] 40 [B] 5 [C] 30 [D] 60 [E] 15

14

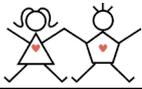
The shape below is made using a square and four identical triangles.



Find the area of the shape.

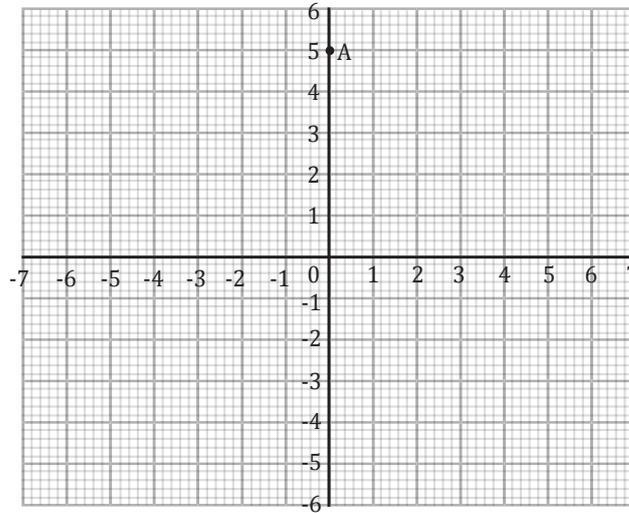
- [A] 36 cm^2 [B] 25 cm^2 [C] 30 cm^2 [D] 96 cm^2 [E] 60 cm^2





15

Point A is moved 2 units down and 1 unit right. It is then reflected in the y-axis. What is the new position of point A?



- [A] (-1,3) [B] (0,3) [C] (1,3) [D] (1,-3) [E] (-1,-3)

16

A map of the UK is prepared using a scale of 1:1000000. If the distance between London and Birmingham is 200 km in reality, what will be the distance on the map?

- [A] 20 km [B] 20 cm [C] 20 m
[D] 20 mm [E] 2 km

17

What is the minimum value possible for the sum $2a + 5b + 4c + d$, when a, b, c and d are different even numbers?

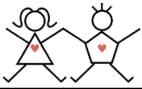
- [A] 46 [B] 36 [C] 22 [D] 66 [E] 26

18

The ratio 0.55:5 is approximately equal to

- [A] $\frac{1}{4}$ [B] $\frac{1}{5}$ [C] $\frac{1}{7}$ [D] $\frac{1}{10}$ [E] $\frac{1}{15}$





19

Ben Spokes scored 150 runs while batting in a test match at a rate of 45 runs per hour. How much time did he spend batting?

- [A] 2 hours 30 minutes [B] 3 hours 20 minutes [C] 2 hours 20 minutes
[D] 3 hours 15 minutes [E] 2 hours 15 minutes

20

The dimensions of a rectangle are 10 cm \times 12 cm. What is the maximum number of identical squares that can fit into this rectangle?
(Take side length of each square = 2 cm)

- [A] 10 [B] 15 [C] 45 [D] 30 [E] 25

21

A group of travellers were asked to vote for their favourite European country and the results are published as a pie chart shown below.



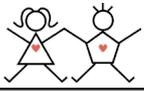
● France ● UK ● Belgium ● Denmark

The number of travellers who participated in the voting has been lost, however it is known that the number of travellers who voted for Denmark is 150.

Which value below is a good approximation for the number of people who voted for the UK?

- [A] 100 [B] 150 [C] 400 [D] 250 [E] 125





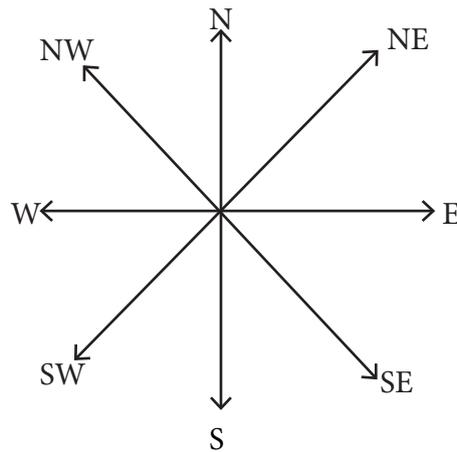
22

Kevin bought 2 dozen pencils for £24. He then sold each pencil for £2.5.
How much profit did Kevin make on each pencil?

- [A] £1.50 [B] £2.50 [C] £1 [D] £6 [E] £2

23

A man turned anticlockwise by 225° from SW position. What is his position now?



What is his position now?

- [A] S [B] SW [C] NE [D] NW [E] N

24

Given,

$$p = 12$$

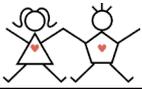
$$3q = p$$

$$r = \frac{p}{4}$$

What is the value of $2p+4q+3r$?

- [A] 36 [B] 48 [C] 49 [D] 52 [E] 24

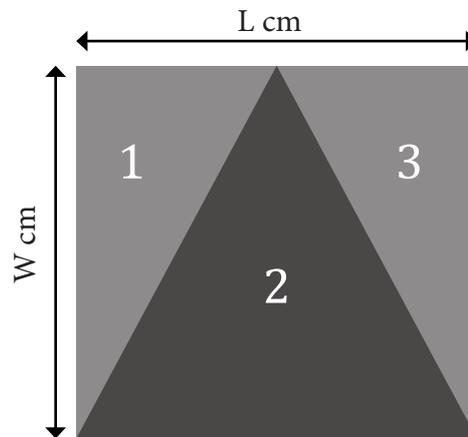




25

An equilateral triangle is drawn inside a rectangle such that the base of the triangle exactly coincides with the length of the rectangle.

(Not to scale)



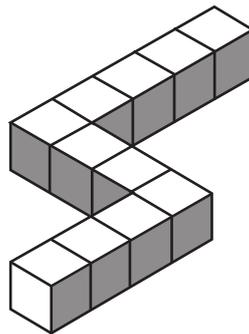
The perimeter of the equilateral triangle is 18 cm. Also, the sum of the perimeters of all the three triangles is 46.4 cm.

What is the width of the rectangle?

- [A] 6 cm [B] 5.2 cm [C] 6.2 cm [D] 8 cm [E] 14.2 cm

26

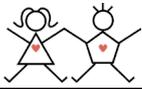
The surface area of the shape below is 4600 cm^2 .



What is the volume of a small cube?

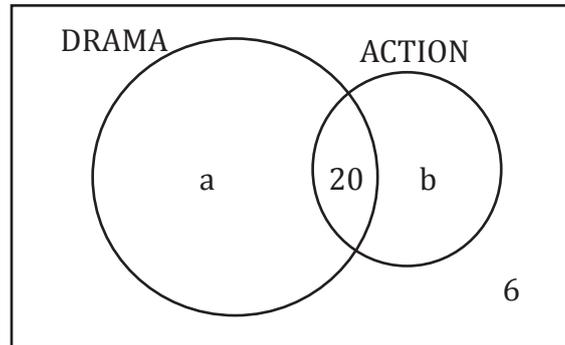
- [A] 1000 cm^2 [B] 1000 cm^3 [C] 100 cm^2 [D] 100 cm^3 [E] 460 cm^2





27

A survey is conducted on 56 people about which genres of movie they like. The results are recorded in the Venn diagram below.

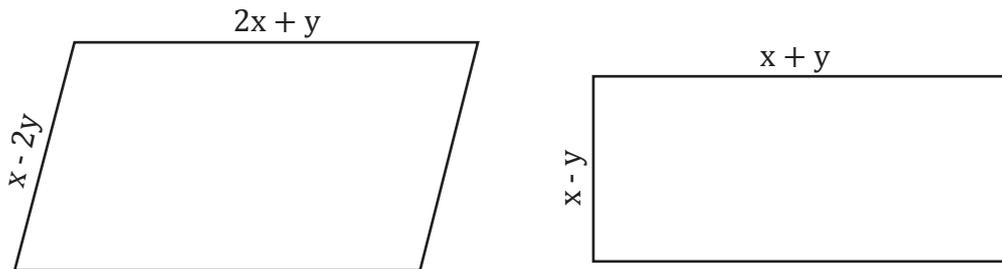


The ratio of people who like only drama to people who like only action is 3:2.

How many people like only action movies?

- [A] 30 [B] 18 [C] 12 [D] 20 [E] 26

28



What is the sum of the perimeters of the above parallelogram and rectangle?

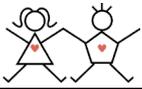
- [A] $10x - 2y$ [B] $4x - 2y$ [C] $2x - y$ [D] $3x + 2y$ [E] $4x + y$

29

What is the value of $2^3 + 4 \div 16 \times 28 - (16 \times 2 - 21)$?

- [A] 10 [B] 12 [C] 6 [D] 4 [E] 15





30

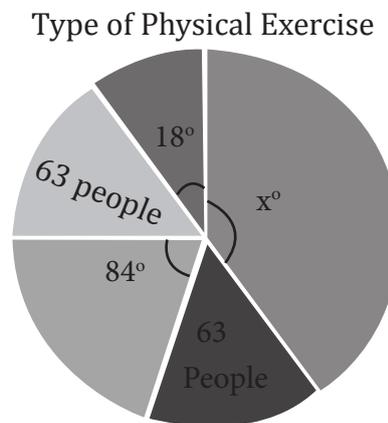
Which fraction is equivalent to the expression below?

$$5\frac{1}{3}\% + 1\frac{1}{3}\%$$

- [A] $\frac{1}{5}$ [B] $\frac{1}{15}$ [C] $\frac{1}{10}$ [D] $\frac{3}{5}$ [E] $\frac{2}{5}$

31

A group of 420 people were asked to vote for their favourite physical exercise and the results are presented in the pie chart shown below.

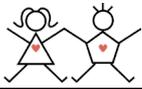


- Yoga • Swimming • Running • Boxing • Others

How many people voted for Yoga?

- [A] 210 [B] 175 [C] 84
[D] 150 [E] 42





32

The UK local time is 5 hours ahead of the US local time.

For example, 8:00 local time in Washington D.C means 13:00 local time in London.

Using this fact, find the missing times ('X' and 'Y') in the below table of flight arrivals and departures.

Flight Details	Departure [Local time in US]	Arrival [Local time in UK]	Flight duration
Washington to London	03:35	'X'	8 hrs 25 mins
Washington to London	'Y'	14:45	7 hrs 55 mins

(Hint: Flight duration is the actual time travelled by the flight)

[A] 17:00 and 01:50

[B] 01:50 and 17:00

[C] 17:50 and 01:00

[D] 05:00 and 13:50

[E] 13:50 and 05:00

33

If \$1 = 80p, then how much is £8.40 in US dollars?

[A] \$8.40

[B] \$10

[C] \$10.50

[D] \$11

[E] \$12.50

34

James went to a shop and bought 4 pencils for 30p each, 2 books for £1.80 each and a bar of chocolate for £1.60.

If James gave a £10 note to the shop owner, how much change should he expect?

[A] £5

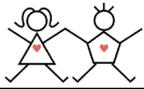
[B] £6.60

[C] £5.60

[D] £6

[E] £3.60





35

London is 5 hours 30 minutes behind Mumbai. Mumbai is 5 hours 30 minutes behind Sydney. London is 6 hours ahead of Chicago.

If the local time in Sydney is 13:00, what is the local time in Chicago?

- [A] 20:00 the same day [B] 20:00 the previous day
[C] 08:00 the same day [D] 08:00 the previous day
[E] 20:30 the previous day

36

Amy weighs 10 kg more than Dirk. Dirk's weight is half of John's. Mel is the heaviest of all with a weight of 95 kg.

If the combined weight of all of the above is 265 kg, what is the range of their weights?

- [A] 40 kg [B] 55 kg [C] 50 kg [D] 80 kg [E] 60 kg

37

A rectangle of dimensions 62 cm \times 61 cm is divided into as many squares as possible with each square of side length 4 cm. How many such squares will fit into this rectangle?

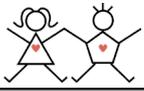
- [A] 25 squares [B] 125 squares [C] 225 squares
[D] 50 squares [E] 150 squares

38

What is the smallest value of K which satisfies $16K - 46 > 100$?

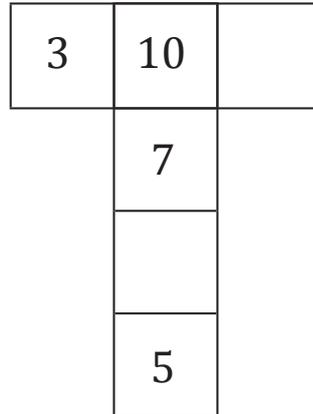
- [A] 15 [B] 25 [C] 24
[D] 10 [E] 12





39

The diagram below shows a net of a cube. The sum of the numbers on the opposite faces of the cube is 12. What are the two missing numbers?



[A] 9 and 4

[B] 9 and 6

[C] 9 and 2

[D] 2 and 8

[E] 9 and 8

40

Donald wrote the largest 4 digit number which has an odd number as its first and last digit. Sam wrote the smallest possible 4 digit number in which all digits are different prime numbers.

Find the difference between the two numbers.

[A] 9999

[B] 1001

[C] 6742

[D] 7642

[E] 1111

41

What is 12.8 subtracted from 17.498 to the nearest hundredth after subtraction?

[A] 4.698

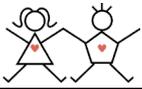
[B] 4.70

[C] 4.69

[D] 4.60

[E] 5





42

A box can be packed with either 40 apples or 20 mangoes. If there is a total of 562 apples and 256 mangoes, how many boxes will be needed to pack them all?

(Box can be packed with a mix of apples and mangoes)

[A] 25 boxes [B] 27 boxes [C] 26 boxes [D] 30 boxes [E] 22 boxes

43

A person decided to buy two tables. They chose one table from row A and one from row B.

Row A has 7 different types of tables

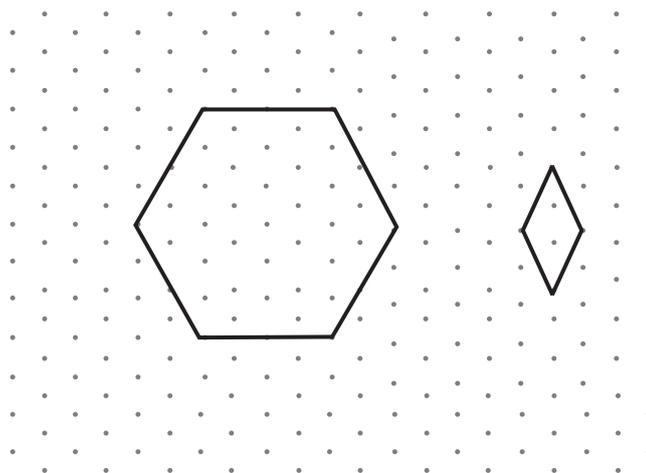
Row B has 4 different types of tables

How many different pairs are possible?

[A] 11 [B] 28 [C] 15 [D] 24 [E] 10

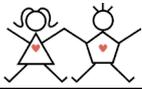
44

The area of the small diamond is d . What is the area of the hexagon drawn in terms of d ?



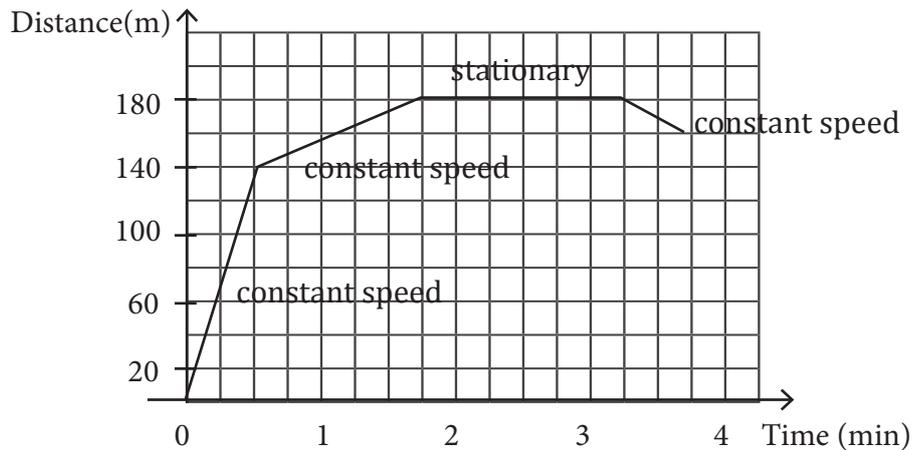
[A] $6 + d$ [B] $6d$ [C] $12d$ [D] $24d$ [E] $36d$





45

The distance time graph below shows the distance covered by a race car during a race.



For how long was the race car stationary?

- [A] 195 s [B] 105 s [C] 100 s [D] 95 s [E] 90 s

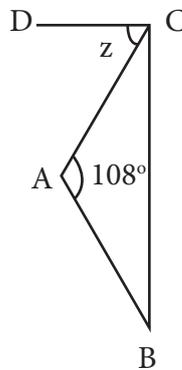
46

For Christmas shopping season, a shop has put red dresses, green dresses and white dresses on sale. The ratio of red:green:white dresses is 11:5:7. If the number of green dresses is 180 less than the number of red dresses, how many white dresses are there in the sale?

- [A] 30 [B] 210 [C] 300 [D] 330 [E] 70

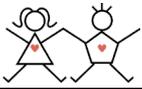
47

Triangle ABC is an isosceles triangle with the length of side AB equal to the length of side AC. CD is perpendicular to BC. What is the size of angle z?



- [A] 72° [B] 36° [C] 18° [D] 54° [E] 48°





48

Shown below is the nutrition label on 250 g pack of instant noodles.

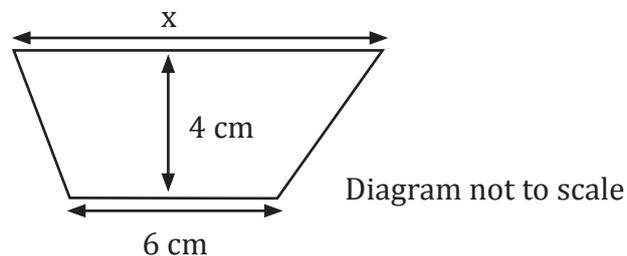
Instant Noodles (For every 250 g)	
Calories	300
Total fat	25 g
Saturated fat	60 g
Sodium	1 g
Carbohydrate	150 g
Protein	14 g

Rick eats 4 packets of instant noodles each day for 3 days in a week. How much sodium does he consume from noodles in this week?

- [A] 16 g [B] 18 g [C] 14 g [D] 15 g [E] 12 g

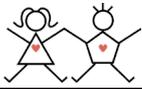
49

The area of the trapezium shown below is 62 cm^2 . What is the value of x ?



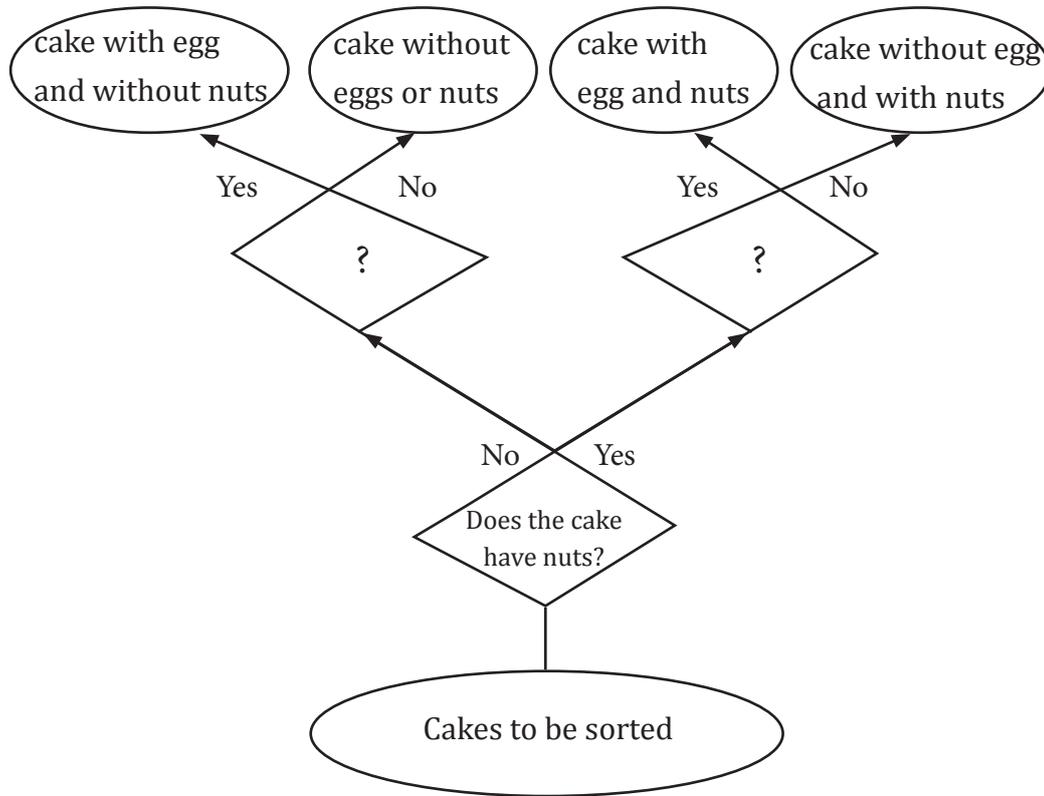
- [A] 38 cm [B] 19 cm [C] 25 cm [D] 9.5 cm [E] 12.5 cm





50

Farm fresh bakers provide an option of cakes. They follow a cake sorting flowchart as shown below.



What should be the label on the boxes with ‘?’

[A] Does the cake contain milk?

[B] Does the cake contain brown sugar?

[C] Does the cake contain quinoa?

[D] Does the cake contain eggs?

[E] Is the cake eggless?



11+ Maths - GL Style (Pack 3) - Test Paper 11

ANSWER MARKING SHEET



Name: _____

Date: _____

School Name: _____

Please mark boxes with a thin horizontal line like this .

1	2	3	4	5	6	7	8	9	10
A <input type="checkbox"/>									
B <input type="checkbox"/>									
C <input type="checkbox"/>									
D <input type="checkbox"/>									
E <input type="checkbox"/>									
11	12	13	14	15	16	17	18	19	20
A <input type="checkbox"/>									
B <input type="checkbox"/>									
C <input type="checkbox"/>									
D <input type="checkbox"/>									
E <input type="checkbox"/>									
21	22	23	24	25	26	27	28	29	30
A <input type="checkbox"/>									
B <input type="checkbox"/>									
C <input type="checkbox"/>									
D <input type="checkbox"/>									
E <input type="checkbox"/>									
31	32	33	34	35	36	37	38	39	40
A <input type="checkbox"/>									
B <input type="checkbox"/>									
C <input type="checkbox"/>									
D <input type="checkbox"/>									
E <input type="checkbox"/>									
41	42	43	44	45	46	47	48	49	50
A <input type="checkbox"/>									
B <input type="checkbox"/>									
C <input type="checkbox"/>									
D <input type="checkbox"/>									
E <input type="checkbox"/>									

For Parents use only

Marks Scored: Time taken:

Comments:

.....

.....

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