PiAcademy

11+ Mathematics
GL Style - Pack 1
Test Paper - 1

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.

1. Which answer has four numbers that are all multiples of 4 or 7?

(A) 4, 10, 14, 16   (B) 12, 21, 28, 56
(C) 14, 20, 35, 72   (D) 21, 24, 36, 25
(E) 42, 56, 4, 18

---

2. This machine triples and then subtracts 4.

? $\longrightarrow$ ☐ $\longrightarrow$ **149**

Which number has been put in?

(A) 53   (B) 47   (C) 51   (D) 55   (E) 49

---

3. $147 \div 3 < x^2$
Which of these is the smallest number x could be?

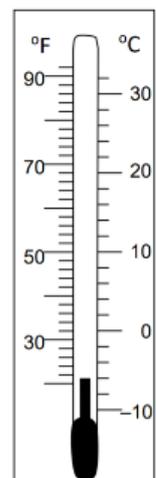(A) 7   (B) 9   (C) 8   (D) 5   (E) 6

---

4. The dial shows the temperature inside a freezer. What is the temperature inside the freezer?

(A) -6°C   (B) -9°C   (C) -8°C   (D) 9°C   (E) 8°C

5. Which of these statements is correct

(A) $4\dfrac{3}{4} = 4.34$

(B) $4\dfrac{1}{2} < 4.25$

(C) $4\dfrac{1}{3} > 4.30$

(D) $4\dfrac{2}{3} = 4.60$

(E) $4\dfrac{1}{4} > 4.30$

6. Look at the information on what is in 100 grams of Maltesers

100g contains:	
Fat	12g
Protein	10g
Carbohydrate	25g
Sugar	50g

A pack of Maltesers weighs 500 grams.

How many grams of carbohydrate are there in a pack of Maltesers?

(A) 100g   (B) 125g   (C) 25g   (D) 200g   (E) 150g

7. Six friends were all born in 2008.
Their birthdays are shown in the table below

Name	Birthday
Lisa	24th June
Mary	14th June
John	13th March
Kevin	29th February
Harry	31st January
Ajay	2nd July

Who is the youngest?

(A) Harry   (B) Lisa   (C) Kevin   (D) John   (E) Ajay

8.	What is the area of the trapezium PQRS?
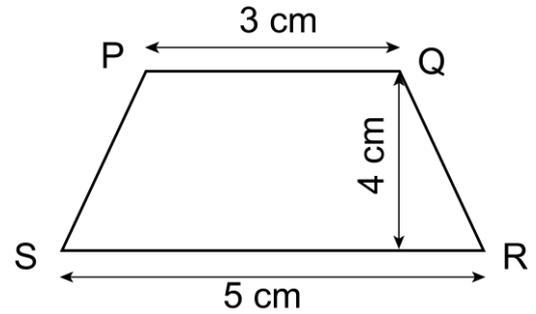
(A) 12 cm²   (B) 16 cm²   (C) 20 cm²   (D) 18 cm²   (E) 14 cm²

---

9. One evening Sophie started watching TV at twenty minutes to four and stopped watching at half past six. How long did she watch the TV?

(A) 3 hours 40 minutes   (B) 2 hours 20 minutes

(C) 1 hour 50 minutes   (D) 2 hours 50 minutes

(E) 2 hours 30 minutes

---

10. Mrs Singh buys 7 metres of rope.
She cuts off 4 pieces.
Each piece is *p cm* long.
She has *q cm* left.

Which of these is equal to *q* ?

(A) $7 - \dfrac{4}{p}$ (B) 4p - 700   (C) $\dfrac{7p}{4}$ (D) 700 - 4p   (E) 7- 4p

---

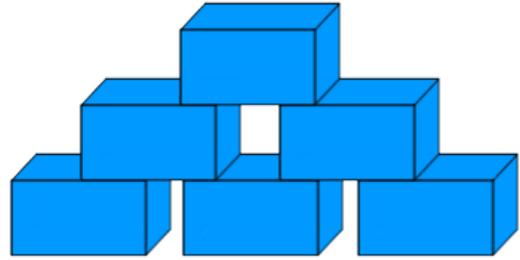11. Which one of these is equal to a hundred thousand?

(A) Number of centimetres in a kilometre (B) Number of grams in a kilogram

(C) Number of millilitres in a litre   (D) Number of centimetres in a metre

(E) Number of milligrams in a kilogram

12. There are 6 blocks in this stack.
The stack is 3 blocks high.

How many blocks will be there in a stack like this that was 6 blocks high?

    (A) 20   (B) 19   (C) 21   (D) 24   (E) 18

13. Sasha picks a three-course meal at random from this menu:

What is the probability that she picks a meal with chicken in it?

Menu

Starter

Chicken Sticks

salmon tartare

Main

Chicken pasta

Cheese pizza

Desert

Red velvet

Fruit soda

(A) $\frac{3}{8}$ (B) $\frac{4}{5}$ (C) $\frac{2}{3}$ (D) $\frac{3}{4}$ (E) $\frac{2}{5}$

14. Some pupils recorded the number of people in a playground at different times one day.
They drew some conclusions from their data.
Which conclusion must be wrong?

(A) The mean number of people in the playground was 12.5

(B) The range in the number of people in the playground was 20.5

(C) The modal number of people in the playground was 13

(D) The smallest number of people in the playground was 0
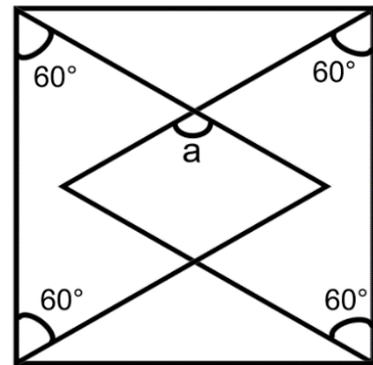
(E) The largest number of people in the playground was 20

| 15. | Aisha has twenty 10p coins, two 5p coins, twelve 2p coins and a £10 note with her. What is the total value of the money Aisha has? |

(A) £12.12   (B) £13.07   (C) £12.34   (D) £13.12   (E) £15.24

| 16. | Ryan made this shape from a square and two equilateral triangles.
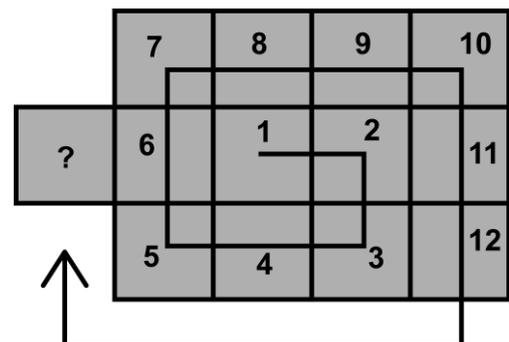
What is the angle 'a' in Ryan's shape? |

(A) 60°   (B) 105°   (C) 90°   (D) 120°   (E) 110°

| 17. | Peter counts backwards from 58 in steps of 9. Which of these numbers will he reach? |

(A) 4   (B) 5   (C) 9   (D) 2   (E) 1

| 18. | These numbers go round in a spiral.

What number will be to the left of 6 in the spiral? |

(A) 21   (B) 17   (C) 18   (D) 15   (E) 19

| 19. | A company ordered 12 cartons of pens on Wednesday and 8 cartons on Thursday. Each carton contained 125 pens. How many pens did the company order altogether? |

(A) 2500   (B) 1250   (C) 2670   (D) 1280   (E) 2450

		Odd	Even
	?	1, 3	2, 4, 6, 12
	?	1, 3, 5, 15	2, 6, 10, 30

20. Two of the labels are missing from this sorting diagram.

Which of these are the missing labels?

(A) Prime, Multiples of 2   (B) Multiples of 3, Multiples 5

(C) Factors of 24, Multiples of 3   (D) Factors of 12, Factors of 30

(E) Prime, Factors of 15

---

21. Which of these words has a vertical line of symmetry?

(A) NOON   (B) PUP   (C) MOM   (D) DUD   (E) LOL

---

22. Kate draws a square on a coordinate grid with corners at (6, 9), (9, 9), (9, 6) and (6, 6).

Which of the following points is inside Kate's square?

(A) (7, 10)   (B) (7, 8)   (C) (8, 10)   (D) (5, 5)   (E) (5, 7)

---

23. A newspaper showed temperatures in 10 cities on a day in December:

London	4°C	Glasgow	– 6°C
Birmingham	3°C	Edinburgh	– 5°C
Leeds	– 4°C	Liverpool	– 1°C
Leicester	1°C	Manchester	2°C
Cardiff	5°C	York	– 3°C

Which was the hottest?

(A) Manchester   (B) Cardiff
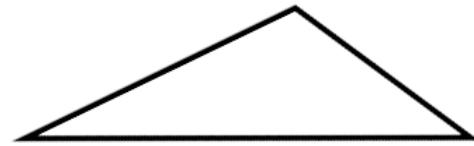
(C) Leeds   (D) Glasgow

(E) Birmingham

24. Sarah has some sticks of different lengths. She can lay the sticks end to end to make triangles, like this:

Sarah chooses sticks with lengths
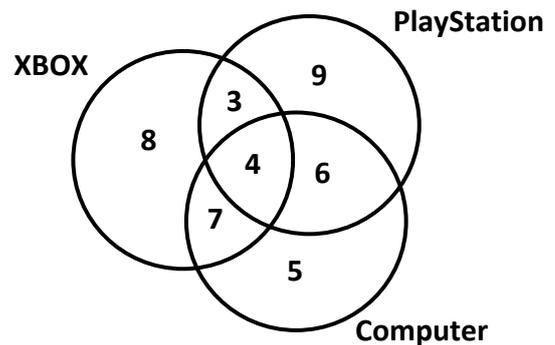3 cm, 5 cm, 8 cm, 10 cm, 11 cm

Which of these sets of three sticks can Nina use to make a triangle?

(A) 3 cm, 5 cm, 8 cm   (B) 11 cm, 8 cm, 3 cm

(C) 3 cm, 10 cm, 8 cm   (D) 5 cm, 3 cm, 11 cm

(E) 10 cm, 5 cm, 3 cm

25. Which number is closest in value to 2 ?

     (A) 2.1   (B) 2.05   (C) 1.95   (D) 2.15   (E) 1.975

26. The three circles represent the children in a class who have XBOX, PlayStation and computer.

How many children do not have a computer?

     (A) 20   (B) 22   (C) 16   (D) 21   (E) 17

27. Molly is facing north-west.

She can see a lake in front of her and a tree on her left.

Which map is she on?

Key
- Lake
- Tree

NORTH
WEST ← → EAST
SOUTH

A   B   C

D   E

28. Which one of these sums gives the smallest answer?

(A) 14 x 7 +4 ÷ 2 –10   (B) 14 ÷ 7 x 4 – 2 + 10

(C) 15 x 6 + 3 – 10 ÷ 2   (D) 12 ÷ 2 x 7 + 10 – 10

(E) 10 +3 x 2 +10 ÷ 5

---

29. Sam and John each had a packet of chocolates. The two packets had the same number of chocolates.

Sam gave a quarter of his chocolates to Mark. John gave three-quarters of his chocolates to Mark.

Which one of these statements is now true?

(A) Sam has more chocolates than Mark.

(B) Sam and John each have the same number of chocolates.

(C) Mark and Sam each have the same number of chocolates.

(D) Sam has more chocolates than John

(E) Mark has fewer chocolates than Sam.

---

30. The net is cut out of cardboard. It is folded along the dashed lines,

Which shape will it make ?
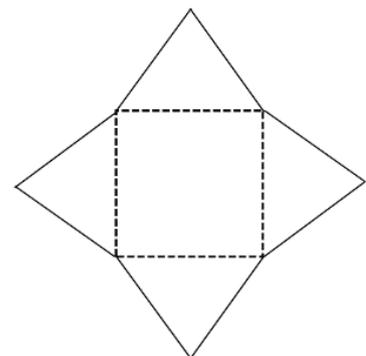
(A) Triangular prism   (B) Square based pyramid

(C) Triangular based pyramid   (D) Cube
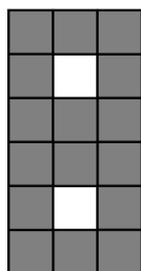
(E) Rectangular prism

31. Oliver has two 'F' shapes each made out of eight squares.
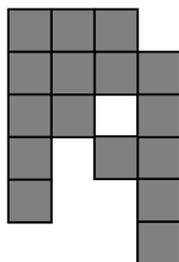
He fits them together to make another shape.
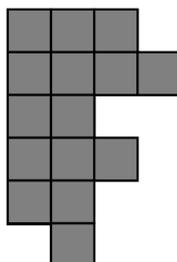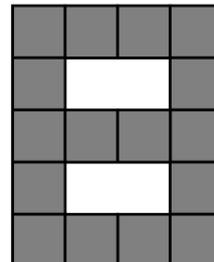Which shape cannot be made by Oliver?
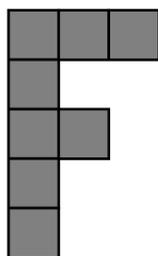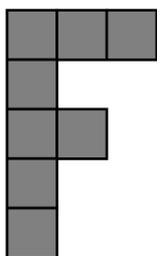
(A)   (B)   (C)   (D)   (E)
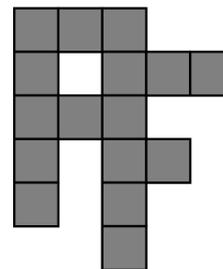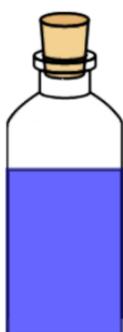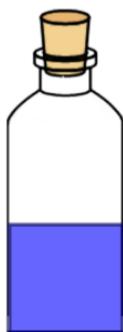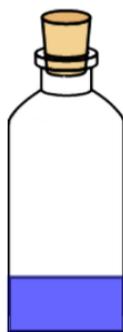

32. A container can hold 2 litres of liquid. Nancy has put 400 ml of juice in it.
Which diagram best shows the juice level in it?

A   B   C   D   E

33. There are 476 children in a school. There are 54 more boys than girls.
How many boys are there in the school?
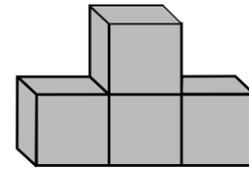
(A) 211   (B) 422   (C) 265   (D) 238   (E) 354
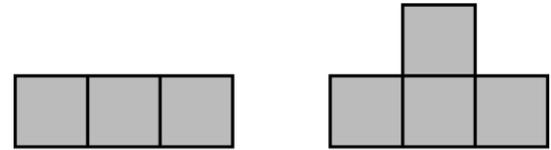
34. This 3D object is made by joining cubes. It is then lowered into a tin of paint and completely submerged.

When the object is taken back out of the paint tin, how many faces are painted?

Top view   Front view

(A) 20   (B) 24   (C) 21   (D) 18   (E) 19

---

35. A tennis club has forty members. The table shows some information about them.

	Boys	Girls	Total
Right – Handed			28
Left – Handed	7		
Total	24		40

How many members of the club are right-handed girls?

(A) 12   (B) 16   (C) 11   (D) 9   (E) 13

---

36. One 10p coin weighs $6\frac{1}{2}$ grams. Karan has £ 2.30 worth of 10p coins. How many grams do they weigh?

(A) 150 grams   (B) 145 grams

(C) 147 $\frac{1}{2}$ grams   (D) 149.5 grams

(E) 140 $\frac{3}{4}$ grams

---

37. If 24th February is Sunday in the year 2019. What day of the week will 7th March be?
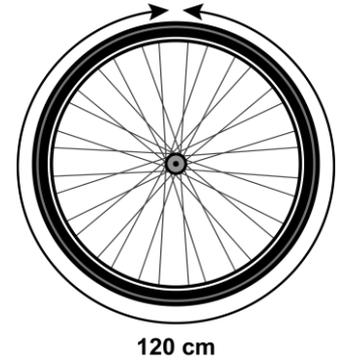
(A) Sunday   (B) Saturday

(C) Monday   (D) Wednesday

(E) Thursday

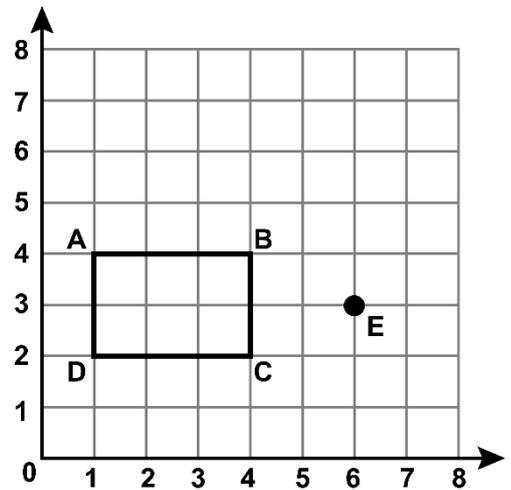**38.** The wheel of Stan's bike has a circumference of 120cm.

How many complete revolutions must the wheel make for Stan to travel 1.8km?

120 cm

(A) 2000 (B) 1200 (C) 1500 (D) 1800 (E) 1000

---

39. The rectangle ABCD is Rotated 90° clockwise about point E.

What will be the new coordinates of point D?

(A) (7, 6) (B) (6, 8) (C) (8, 7) (D) (5, 8) (E) (7, 7)

---

40. There are 74 passenger seats on a bus.
The bus left the garage with 2 passengers.
At the first stop, 26 people got on.
At the second stop, 17 people got on and 5 got off
At the Third stop, 21 people got on and 9 got off.
At the fourth stop, 11 got on and 15 got off.

How many empty seats are there now?

(A) 48 (B) 26 (C) 46 (D) 38 (E) 24

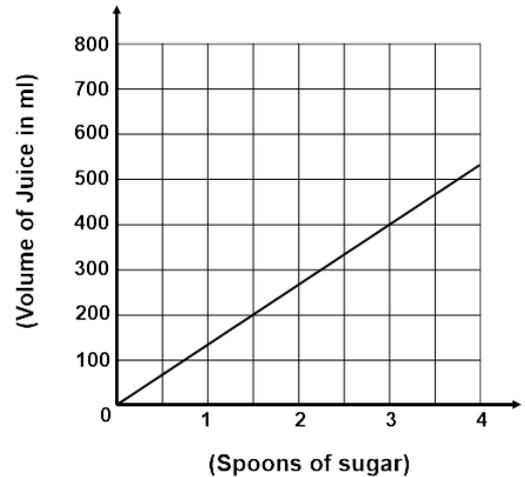Visit piacademy.co.uk/11-plus-papers to check the 'answers'

41. Mary is serving drinks for 8 guests. Each guest has a glass containing 300ml of juice.
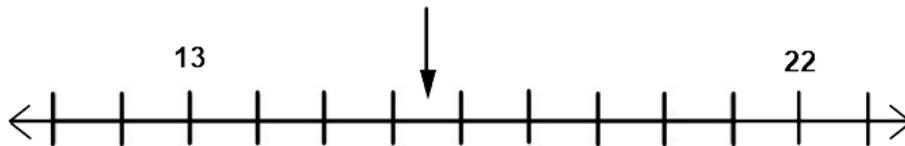
The graph shows the number of spoons of sugar required to make a certain amount of juice.

How many spoons of sugar did Mary use?

(A) 15   (B) 18   (C) 10   (D) 20   (E) 24

---

42. What number is the arrow pointing to on this number line?

(A) 17   (B) 17.5   (C) 14.5   (D) 18   (E) 16.5

---

43. A school did a survey on favourite ice cream flavours.

How many children liked chocolate more than strawberry?

Favourite Ice cream flavour

Key stands for 10 children

stands for 5 children

Vanilla	
Strawberry	
Butterscotch	
Chocolate	
Black currant	

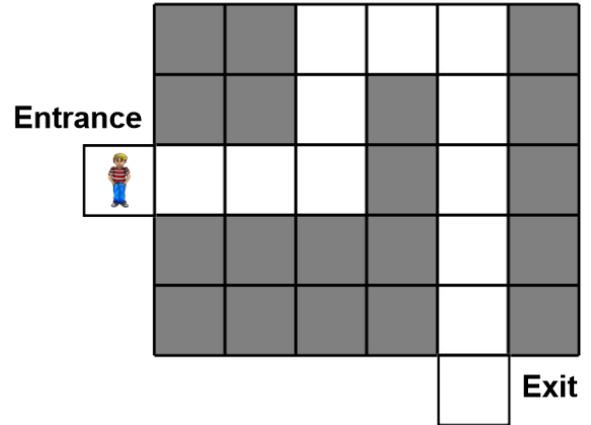(A) 5   (B) 15   (C) 10   (D) 20   (E) 25

44. Max wants to guide his friend Nash along the white squares through this maze.

Nash stars on the square marked 'Entrance' and must finish on the square marked 'exit'. He can only MOVE FORWARD, TURN RIGHT 90° and TURN LEFT 90°.

Which instructions will guide Nash through the maze?

(A) MOVE FORWARD 4, TURN LEFT 90°, MOVE FORWARD 3, TURN RIGHT 90°, MOVE FORWARD 3, TURN RIGHT 90°, MOVE FORWARD 6

(B) MOVE FORWARD 4, TURN RIGHT 90°, MOVE FORWARD 2, TURN RIGHT 90°, MOVE FORWARD 2, TURN LEFT 90°, MOVE FORWARD 6

(C) MOVE FORWARD 3, TURN LEFT 90°, MOVE FORWARD 2, TURN RIGHT 90°, MOVE FORWARD 2, TURN RIGHT 90°, MOVE FORWARD 5

(D) MOVE FORWARD 3, TURN LEFT 90°, MOVE FORWARD 3, TURN LEFT 90°, MOVE FORWARD 2, TURN RIGHT 90°, MOVE FORWARD 5

(E) MOVE FORWARD 4, TURN RIGHT 90°, MOVE FORWARD 2, TURN LEFT 90°, MOVE FORWARD 2, TURN LEFT 90°, MOVE FORWARD 5

45. Merlin used this decision tree to sort a pile of white and black shorts.

What is missing from the empty shape?
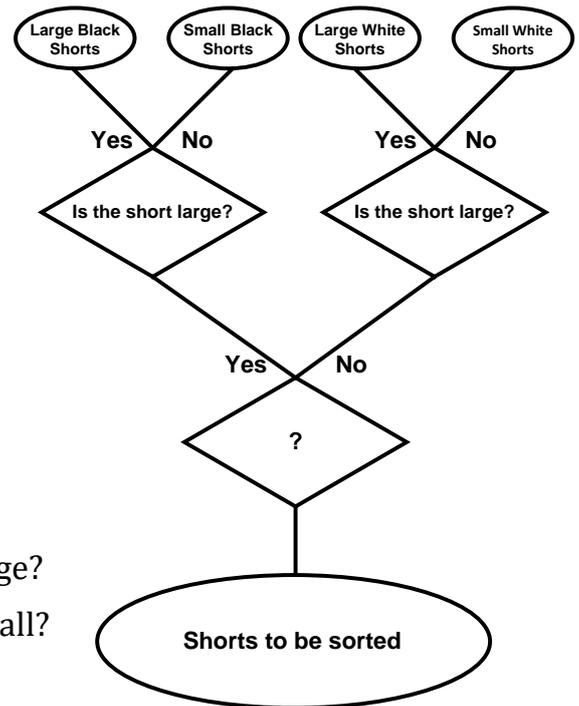
(A) Is the short black?   (B) Is the short large?

(C) Is the short white?   (D) Is the short small?

(E) Is the short yellow?

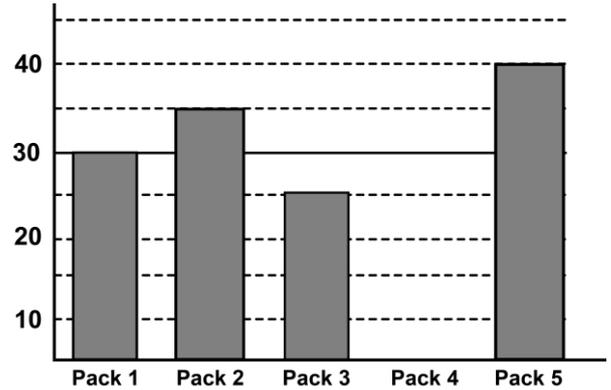Visit piacademy.co.uk/11-plus-papers to check the 'answers'

46. There are five different packs of chocolates.

The number of chocolates in each pack is given in this bar chart.

The mean number of chocolates in a pack was 30. How many chocolates were there in pack 4?
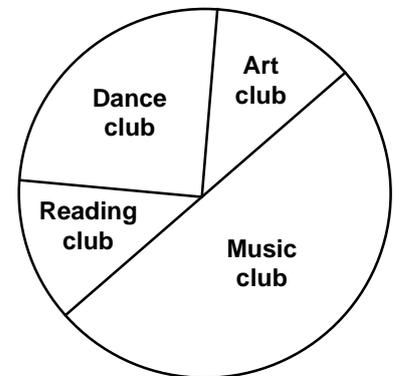

(A) 20   (B) 25   (C) 15   (D) 18   (E) 22

---

47. Each pupil in the school joins in one of four clubs.

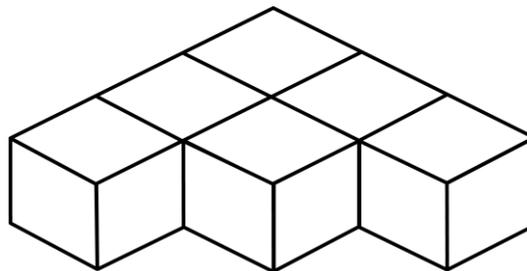The pie chart shows the proportion of pupils who are in each club.

34 pupils are there in the music club.
How many pupils are there in the dance club?

(A) 15   (B) 24   (C) 17   (D) 16   (E) 20

---

48. This solid is made from 6 small wooden cubes.

The whole solid is painted blue.

How many faces are painted blue?

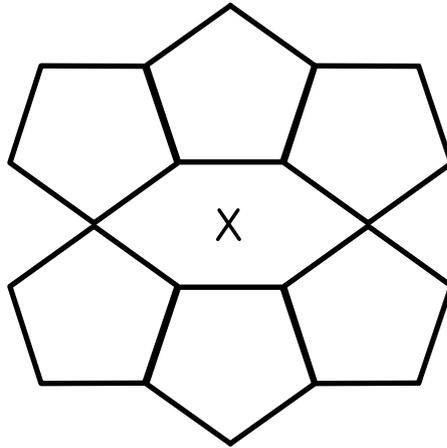(A) 22   (B) 24   (C) 26   (D) 17   (E) 20

49. Sam has a lot of regular pentagons.

The edges of each Pentagon are 7cm long

He fits 6 of the Pentagons together to make this pattern.

What is the perimeter of the shape X in the middle of Sam's pattern?

(A) 30cm   (B) 40cm   (C) 42cm   (D) 30cm   (E) 42cm

50. The point A is one corner of a right-angled triangle.
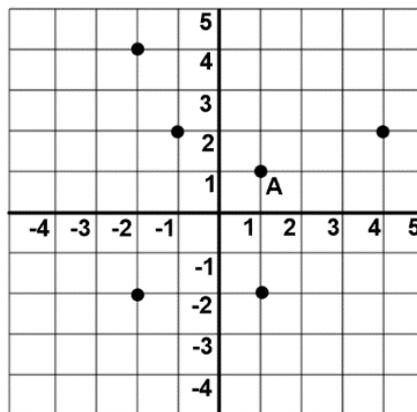
Which of these two pairs could be the other two corners of the right-angled triangle?

(A) (-2, -2) and (-1, 2)   (B) (-2, 4) and (-2, -2)

(C) (4, 2) and (-1, 2)   (D) (-1, 2) and (-2, 4)

(E) (4, 2) and (1, -2)

11+ Maths - GL Style (Pack 1) - Test Paper 1
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 B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E

11	12	13	14	15	16	17	18	19	20
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E

21	22	23	24	25	26	27	28	29	30
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E

31	32	33	34	35	36	37	38	39	40
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E

41	42	43	44	45	46	47	48	49	50
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E	A B C D E

For Parents use only

Marks Scored: --------------------------------   Time taken: ----------------------------

Comments: --