

PiAcademy

11 + Mathematics SET Style - Pack 1 Test Paper - 4

Instructions:

1. The time allowed is 45 minutes for 49 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:



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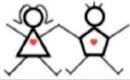


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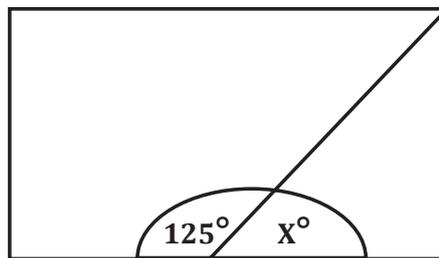


Stop working and await instructions.

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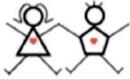


- 1 Choose a pair of numbers that have 1200 as a common multiple and 10 as a common factor.
- (A) 240 and 5 (B) 48 and 25 (C) 30 and 40
(D) 24 and 50 (E) 600 and 2
- 2 Jane is thinking of a number. She squares the number and then adds six to the answer. If her final answer is seventy, what number did Jane think of?
- (A) 32 (B) 8 (C) 38 (D) 16 (E) 4
- 3 Amy, Bob, Charlie and Delia are having pizza for dinner. Amy and Bob each eat $\frac{1}{3}$ of the pizza. Charlie and Delia are sharing the rest of the pizza equally. What fraction of the pizza will Charlie and Delia each have?
- (A) $\frac{1}{2}$ (B) $\frac{1}{6}$ (C) $\frac{1}{4}$ (D) $\frac{1}{5}$ (E) $\frac{1}{3}$
- 4 How would you work out the value of angle x° and what would be your reason?
The diagram is not accurately drawn.



- (A) $360-125$, because angles in a quadrilateral add up to 360°
(B) $180-125$, because angles on a straight line add up to 180°
(C) $360-125$, because angles around a point add up to 360°
(D) $180-125$, because angles in a triangle add up to 180°
(E) $125-90$, because right angle is 90°





- 5 Which of these sums will give the same answer as the problem below?

$$\frac{3}{5} + \frac{4}{10} = \boxed{}$$

- (A) $\frac{1}{2} + \frac{2}{3}$ (B) 12×0 (C) $6.5 - 5$
(D) 2^2 (E) $3.5 \div 35 \times 10$

- 6 Ms. Hunt is baking some cakes for a summer fayre and she is following this recipe

Victoria Sponge Cake	
4	Eggs
200g	Caster Sugar
250ml	Double Cream, Whipped

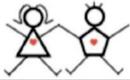
How many cakes can she bake if she is using 16 eggs, 850g Caster sugar and 1.5L Double cream?

- (A) 14 (B) 6 (C) 3 (D) 12 (E) 4

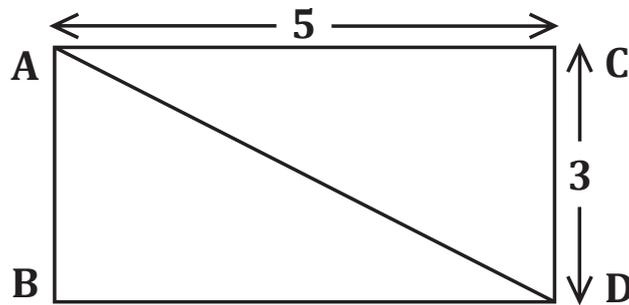
- 7 Fanny and Emma went on a holiday together. They shared a room at a hotel and they split the cost equally. The room cost £100 per night including breakfast. They stayed for seven nights. Each of them also spent £10 per night for their dinner. How much did Fanny spend on the holiday?

- (A) £420 (B) £710 (C) £770 (D) £60 (E) £120



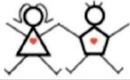


- 8 ABCD is rectangle and AD is a diagonal of the rectangle ABCD.
Work out the area of triangle ABD

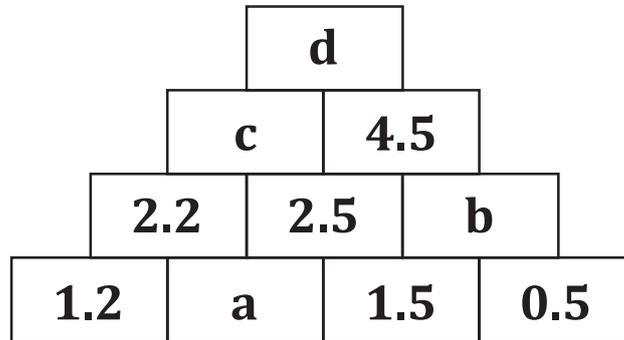


- (A) 15 cm^2 (B) 16 cm^2 (C) 7.5 cm^2 (D) 8 cm^2 (E) 10 cm^2
- 9 A department store gives sale of 25% for all their clothing. Mia wants to buy a dress that originally costs £84. She has £50 with her to spend. How much more money does she need to buy the dress?
- (A) £21 (B) £63 (C) £12 (D) £13 (E) £30
- 10 The six angles of two different triangles are listed in decreasing order like shown
 $120^\circ, 84^\circ, 60^\circ, 37^\circ, 36^\circ, \dots$
What is the last angle in the list?
- (A) 20° (B) 23° (C) 25° (D) 28° (E) 30°
- 11 $102.305 \text{ cm} = 1 \text{ m} + \underline{\hspace{2cm}} + 0.3 \text{ cm}$
- (A) 2.05 cm (B) 2.005 m (C) 0.0205 m (D) 20.05 mm (E) 0.2005 m





- 12 A number pyramid is shown below. Two bricks next to each other add up to make the brick on their top. Find the value of a, b, c, and d



- (A) $a = 1.5, b = 2, c = 4.7, d = 9$ (B) $a = 1, b = 2, c = 4, d = 8$
(C) $a = 1, b = 2, c = 4.7, d = 9.2$ (D) $a = 2, b = 2.5, c = 4.7, d = 9.2$
(E) $a = 1.7, b = 2.5, c = 3.7, d = 9.2$
- 13 Maggie lives in London, and the time was 21:32 on 3rd July 2019 when she received a phone call from her cousin who lives in Sydney. Sydney is nine hours ahead of London. What would be the time and date in Sydney when her cousin called her?

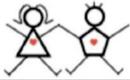
- (A) 12:32 on 3rd July 2019 (B) 06:32 on 4th July 2019
(C) 06:32 on 3rd July 2019 (D) 15:32 on 4th July 2019
(E) 21:32 on 4th July 2019

- 14 work out the following sum:

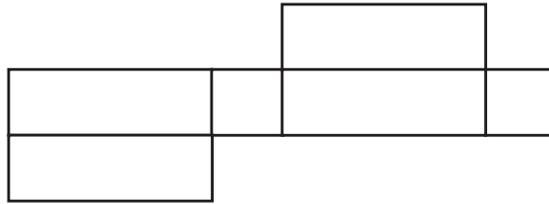
$$\begin{array}{r} 145 + 155 \\ \hline 12.5 \end{array}$$

- (A) 16 (B) 24 (C) 20 (D) 32 (E) 12





15



Which 3D shape does the net form?

- (A) Cube (B) Triangular Prism (C) Cylinder
(D) Rectangular prism (E) Pyramid

16

Gladys is working out how much she will have to pay for hiring a car using this formula

$$\text{Total Cost} = (\text{Number of miles} \times 35\text{p}) + \text{£}3.00$$

She needs to drive 2 miles from her house to the gym and then another 3 miles from the gym to a shop. She will drive 5 miles from the shop to her home back again. How much will she pay for this trip?

- (A) £6.50 (B) 353p (C) 655p (D) £4.75 (E) 335p

17

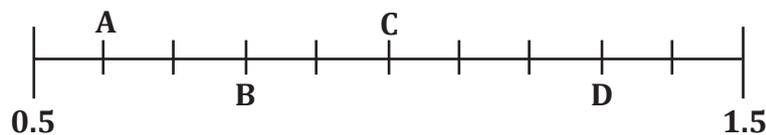
What is the 7th number of this sequence?

12, 24, 48

- (A) 84 (B) 168 (C) 97 (D) 768 (E) 108

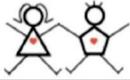
18

What is the value marked by A and C on the number line?

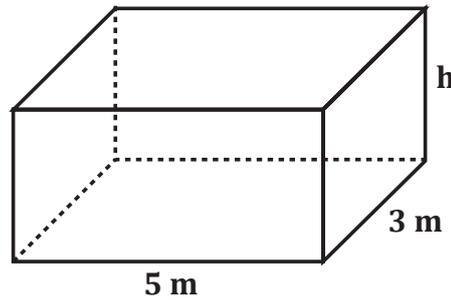


- (A) $A = 0.55$ and $C = 0.75$ (B) $A = 0.6$ and $C = 1.0$
(C) $A = 0.75$ and $C = 0.90$ (D) $A = 0.55$ and $C = 1.0$
(E) $A = 0.6$ and $C = 0.85$





- 19 The volume of the cuboid on the right is 60 m^3 . Find the height of the cuboid



- (A) 15 m (B) 4 m (C) 12 m (D) 45 m (E) 10 m

- 20 The integer 13 is prime, and its 'reverse' 31 is also prime. How many two-digit prime numbers are there in total which have the same property?

- (A) 11 (B) 12 (C) 8 (D) 9 (E) 10

- 21 Which value of x that will make this equation correct?

$$2x + 5 = 20 - x$$

- (A) $x = 10$ (B) $x = 5$ (C) $x = 4$ (D) $x = 6$ (E) $x = 3$

- 22 Work out the following sum

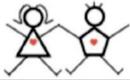
$$\frac{10(5^3 - 8^2)}{6 - 4}$$

- (A) 310 (B) 315 (C) 305 (D) 61 (E) 60

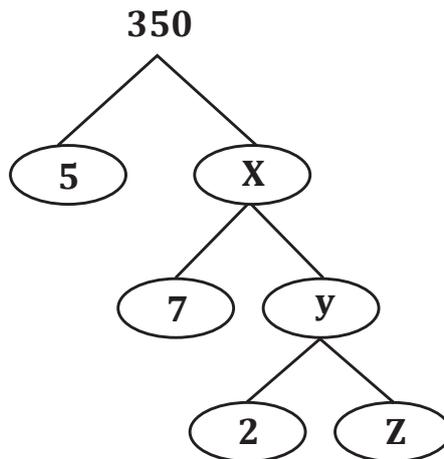
- 23 The sum of three consecutive odd numbers is 117. What is the largest number out of the three?

- (A) 37 (B) 43 (C) 29 (D) 53 (E) 41





- 24 Find out the values of x , y and z from this factor tree



- (A) $x = 35, y = 5, z = 5$ (B) $x = 70, y = 10, z = 5$ (C) $x = 70, y = 5, z = 10$
(D) $x = 35, y = 10, z = 5$ (E) $x = 20, y = 35, z = 10$

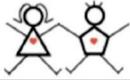
- 25 Leo is recording the number of goals he scores for seven days while he is in a holiday football camp. His scores are shown in the table below

Day	Number of Goals
1	3
2	5
3	2
4	2
5	3
6	4
7	2

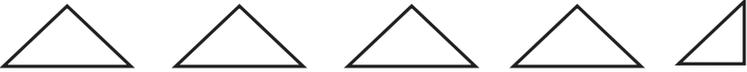
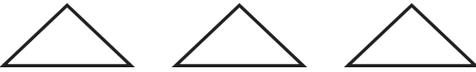
What is his mean score?

- (A) 1 (B) 7 (C) 4 (D) 3 (E) 5





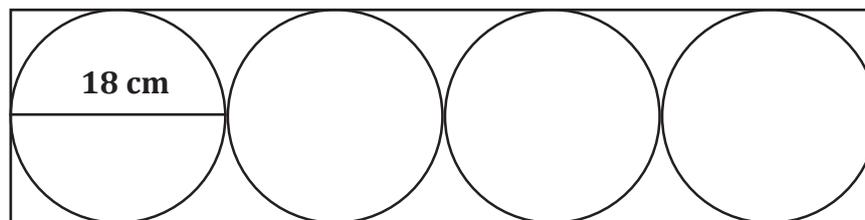
- 26 A boutique sells coats and they recorded their sales in the first five months of the year, as shown in the diagram. Work out the total number of coats they sold

January	
February	
March	
April	
May	

Key  = 24

- (A) 240 (B) 312 (C) 336 (D) 360 (E) 300

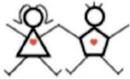
27



Lucy is drawing four identical circles with diameter of 18cm for each circle. She needs to draw a rectangle around the four circles. What would be the length and the width of the rectangle?

- (A) Length = 72, Width = 18 (B) Length = 72, Width = 9
(C) Length = 36, Width = 9 (D) Length = 36, Width = 18
(E) Length = 72, Width = 9





- 28 Bus A leaves the depot every 15 minutes
Bus B leaves the depot every 20 minutes
They first leave together at 07:30 in the morning
What time next in the day would they leave together again?

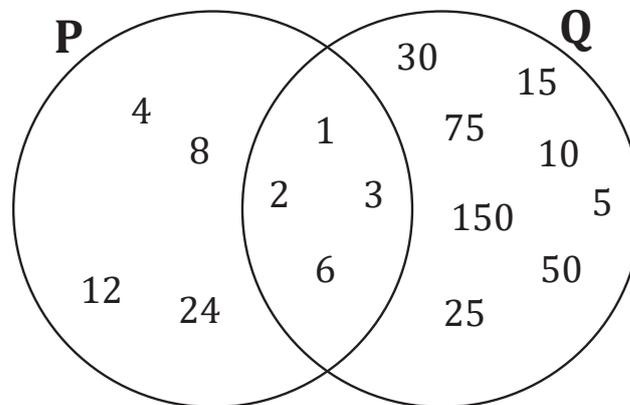


(A) 07:45 AM (B) 08:30 PM (C) 08:20 AM (D) 08:30 AM (E) 07:45 PM

- 29 Emma and Sue work in a restaurant and they are cleaning some plates. For every three plates Emma cleans, Sue cleans one plate. If the total number of plates they cleaned were 72, how many did Sue clean?

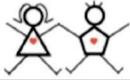
(A) 25 plates (B) 20 plates (C) 30 plates (D) 18 plates (E) 21 plates

- 30 The Venn diagram below shows two groups, P and Q.
What could each group be representing?

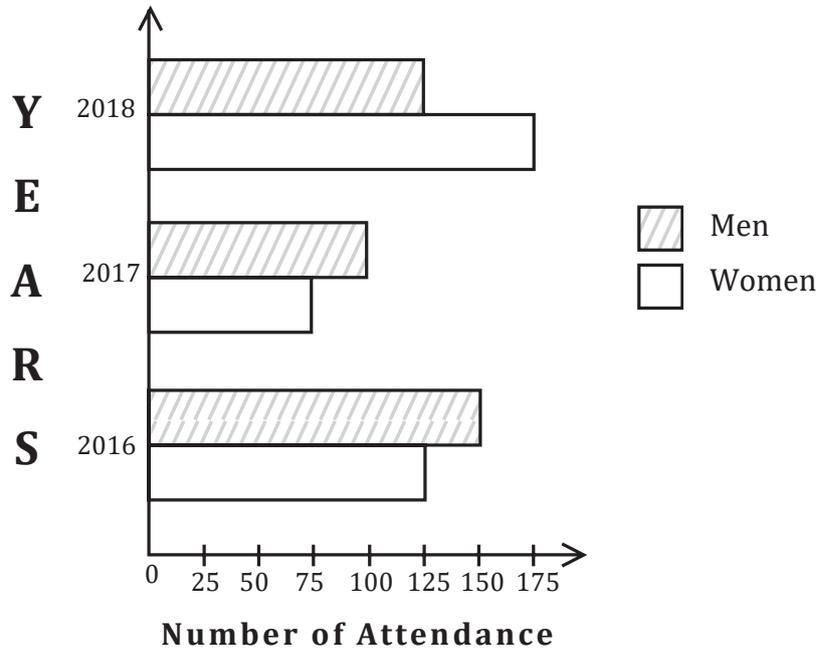


- (A) P is multiples of 2 and Q is multiples of 3
(B) P is multiples of 4 and Q is multiples of 6
(C) P is factors of 24 and Q is factors of 50
(D) P is factors of 24 and Q is factors of 150
(E) P is multiple of 8 and Q is factors of 75





31



A summer camp in London presents the number of people who attended the camp for the last three years on a bar chart as shown above. Work out the mean number of people for each year.

- (A) 200 (B) 250 (C) 300 (D) 275 (E) 325

32

Elizabeth just came back from a holiday in France. She bought a pair of sunglasses for €90 while she was there.

She saw a same pair of sunglasses in a shop the day after she arrived in the UK for £75.

If the exchange rate is 90p for every €1, how much cheaper are the sunglasses in the UK?

- (A) £15 (B) £10 (C) £5 (D) £6 (E) £25

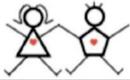
33

Simplify the below expression:

$$2a + 3b - a + 6 + 9b$$

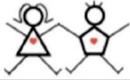
- (A) $3a + 12b + 6$ (B) $a + 6b + 6$ (C) $a + 12b + 6$
(D) $3a + 6b + 6$ (E) $3a + 12b$



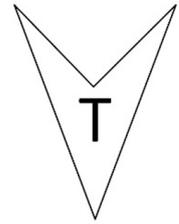
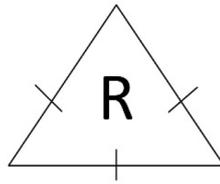
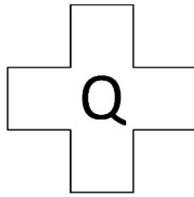
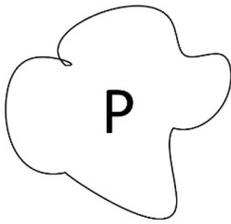


- 34** Choose from the option below, the correct figure for
Twenty two million, one thousand and thirty five
- (A) 2201305 (B) 22001035 (C) 22000135
(D) 20200135 (E) 20201035
- 35** Mia asks 240 students in her school on how they get to school every morning.
A quarter of the students come to school on buses,
30% of the students come to school on foot and the rest come to school by car.
How many students come to school by car?
- (A) 180 (B) 18 (C) 108 (D) 81 (E) 132
- 36** Heliya, David, Ummaya, and Ruby are measuring their heights.
Heliya's height is 154.53 cm.
David is 0.53 shorter than Heliya.
Ummaya's height is 154.3 cm.
Ruby's height is 1.03 cm more than Ummaya's.
Which of the options below is the correct order for their height, starting from the shortest?
- (A) Ummaya, Heliya, Ruby, David (B) Ummaya, David, Heliya, Ruby
(C) David, Ummaya, Heliya, Ruby (D) Heliya, Ruby, Ummaya, David
(E) David, Ruby, Ummaya, Heliya
- 37** Lisa is pouring out squash from a 2L jug into several identical cups. Each cup has a capacity of 125ml. How many cups can Lisa fill if she is to pour out all the squash from the jug?
- (A) 8 cups (B) 16 cups (C) 12 cups (D) 10 cups (E) 14 cups





38



Arrange the above shapes in the order of number of lines of symmetry they each have, starting with the smallest.

- (A) T, R, P, Q, S (B) P, T, S, R, Q (C) R, S, T, P, Q
(D) P, R, T, Q, S (E) S, P, T, Q, R

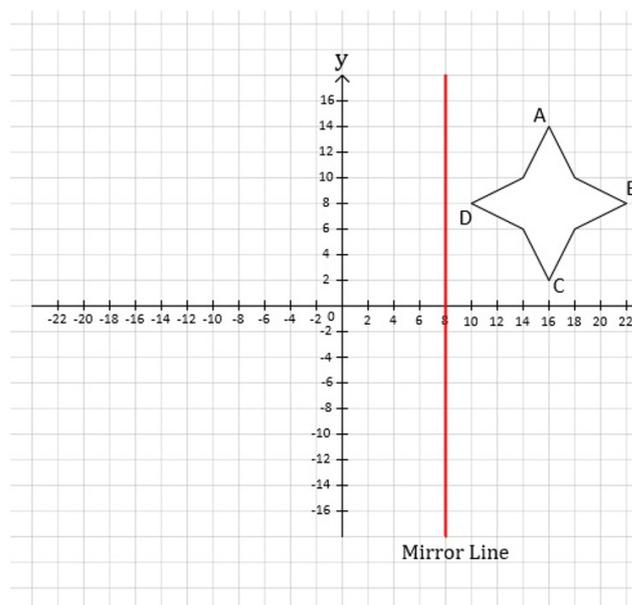
39

The distance between Town A and Town B is 350 km. Larry leaves town A at 08:00. What should be Larry's travelling speed if he wants to arrive in Town B by 15:00?

- (A) 50km/hour (B) 70km/hour (C) 75km/hour
(D) 35km/hour (E) 55km/hour

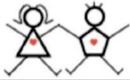
40

The shape on the grid is reflected on the mirror line, then it is moved ten units West and then ten units South. What is the final coordinate of point D in the shape?



- (A) (-2, -4) (B) (-4, -2) (C) (-10, -8)
(D) (-8, -10) (E) (-4, 0)





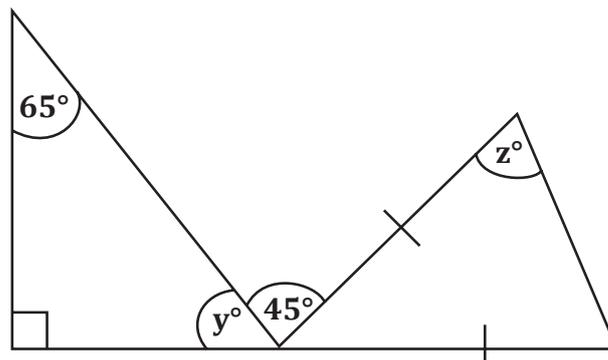
41 Elvira is x years old this year. Her Mother is 30 years older than her. Which of these expressions is the correct one for Elvira's Mum in five years' time?

- (A) $x + 30$ (B) $30 - x$ (C) $5 + (30 + x)$
(D) $(30 + x) - 5$ (E) $5 \times (30 + x)$

42 The area of a square is 256 cm^2 . What is the perimeter of the square, in metres?

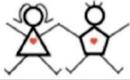
- (A) 64 cm (B) 72 cm (C) 0.72 m (D) 0.64 m (E) 96 cm

43 Work out the angles y and z shown in the diagram below.



- (A) $y = 25^\circ$ and $z = 70^\circ$ (B) $y = 25^\circ$ and $z = 35^\circ$
(C) $y = 35^\circ$ and $z = 25^\circ$ (D) $y = 70^\circ$ and $z = 25^\circ$
(E) $y = 35^\circ$ and $z = 70^\circ$





- 44 The table below show distances between different places Ms. McMannus travels to in one week.

On weekdays, she would drive her kids to school then drive to her office. When she finishes work, she would drive back to school to pick up her children then back home.

On weekends (Saturday and Sunday), she would drive to the shop and then to the gym before she comes back home.

What is the total distance she travels in a week?

Home				
3 km	School			
6 km	3 km	Office		
5 km	5 km	2 km	Gym	
4 km	3 km	2 km	3 km	Shop

- (A) 80km (B) 84km (C) 82km (D) 78km (E) 75km

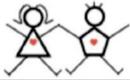
- 45 Kim is sorting out some coins that she kept every time she received the change from shopping. She has:

20 coins of 5p
35 coins of 2p
15 coins of 10p
15 coins of 20p
10 coins of 50p

How much money does she have in total with her?

- (A) £112 (B) £11.20 (C) £10.20 (D) 1350p (E) £12.50





46 Mark makes some statements about a rectangle below.

P) All angles are right angles

Q) The diagonals are perpendicular

R) All sides are of equal length

S) The diagonals are of equal length

T) All angles add up to 180°

Which of his statements are true?

- (A) P and T (B) Q and R (C) P and S (D) R and S (E) S and T

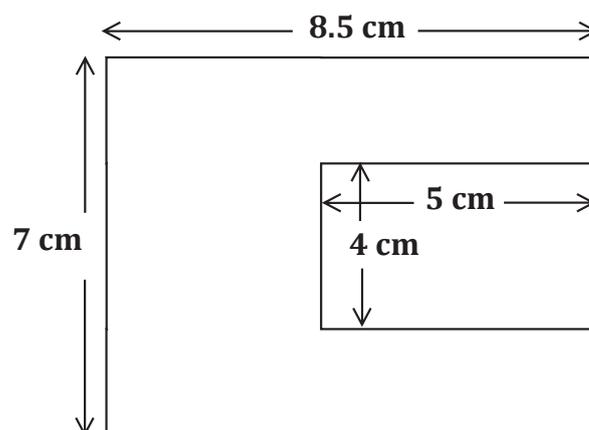
47 The average temperature in Moscow during the winter months is -15° .

The average temperature in London during the winter months is 10° .

What is the temperature difference between Moscow and London?

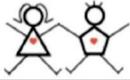
- (A) 15° (B) 25° (C) 10° (D) 12° (E) 13°

48 Work out the perimeter of the shape shown on the right



- (A) 40 (B) 35 (C) 41 (D) 37 (E) 43





49 This set of numbers have mean of 15. What is the median of this set?

10

20

15

?

14

(A) 10

(B) 20

(C) 16

(D) 15

(E) 14



11+ Maths SET Style (Pack 1) - Test Paper 4
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"/>									
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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"/>									
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C <input type="checkbox"/>									
D <input type="checkbox"/>									
E <input type="checkbox"/>									
41	42	43	44	45	46	47	48	49	
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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