

# PiAcademy

## 11+ Mathematics SET Style - Pack 1 Test Paper - 2

### Instructions:

1. Do not open this booklet until you are told to do so.
2. You will have 60 minutes to do the test and the total marks are 60.
3. You may work the questions out in your head, or by writing on the white area around the question.
4. Write the answer on the question paper itself in the space provided for the answer.
5. If you have written the wrong answer, erase it or cross it out and write the new one. Make sure that your final answer is clear. You will not lose marks for crossing out.
6. No Marks are lost for an incorrect answer.

Symbols used:



Go to the next page.

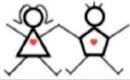


Do not turn the page until told to do so.



Stop working and await instructions.

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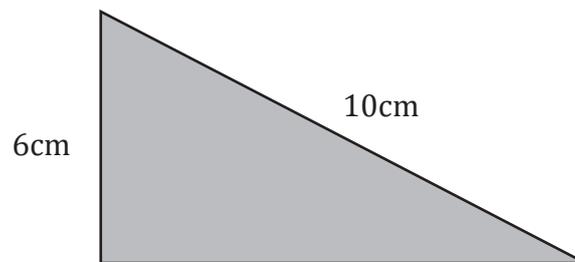
1 Which number is the odd one out?

- (A) 4                      (B) 16                      (C) 25                      (D) 37                      (E) 49

2 How many milligrams in 7.54kg?

- (A) 754mg    (B) 7540mg    (C) 75400mg    (D) 754000mg    (E) 7540000mg

3 What is the area of this triangle?



- (A)  $30\text{cm}^2$     (B)  $24\text{cm}^2$     (C)  $15\text{cm}^2$     (D)  $60\text{cm}^2$     (E)  $20\text{cm}^2$

4 This magic square contains all the numbers from 1-9.

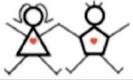
Note: In a magic square sum of the numbers in all rows, columns and diagonals are equal

	7	6
9		1
4	3	

Which number goes in the shaded box?

- (A) 1                      (B) 2                      (C) 3                      (D) 5                      (E) 8





5 A van can carry 182 boxes. How many journeys must it make to transport 5240 boxes?

- (A) 27            (B) 28            (C) 29            (D) 30            (E) 31

6 What is the first negative number in this sequence?

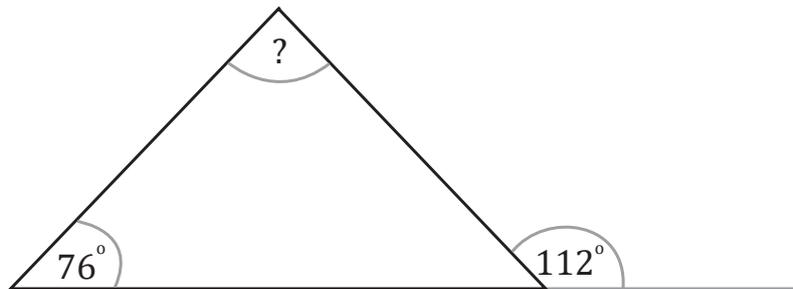
105, 98, 91, 84, .....

- (A) -1            (B) -5            (C) -7            (D) -2            (E) -3

7 Which number is **not** a common factor of 56 and 84?

- (A) 1            (B) 2            (C) 3            (D) 4            (E) 7

8 Look at this diagram. What is the size of the angle marked with a question mark?

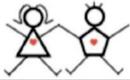


- (A)  $68^{\circ}$             (B)  $76^{\circ}$             (C)  $104^{\circ}$             (D)  $36^{\circ}$             (E)  $90^{\circ}$

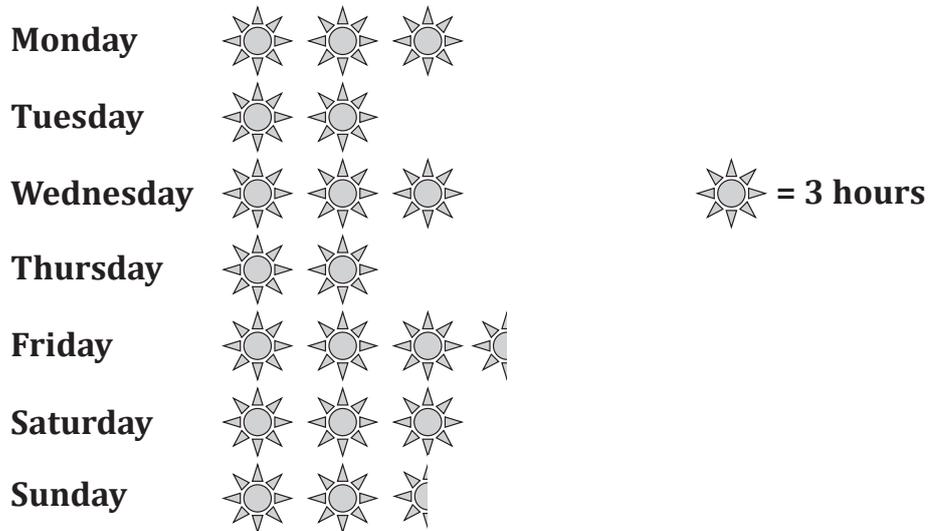
9 What is the approximate value of 30% of 66.666 ?

- (A) 6            (B) 16            (C) 18            (D) 20            (E) 48



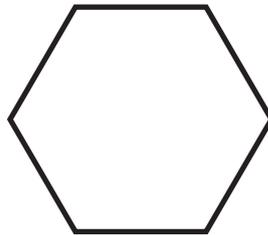


- 10 Look at this pictogram showing the number of hours of sunshine for 1 week in July.



How many more hours of sunshine were there on Friday than on Tuesday?

- 11 What is the sum of the interior angles of this shape?



- 12 How many quarters are there in 12?

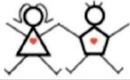
- 13 Martin is manually numbering the pages of a book from 1 to 124, how many times will he write the number '2' in total?

(A)  $360^{\circ}$       (B)  $450^{\circ}$       (C)  $540^{\circ}$       (D)  $720^{\circ}$       (E)  $1080^{\circ}$

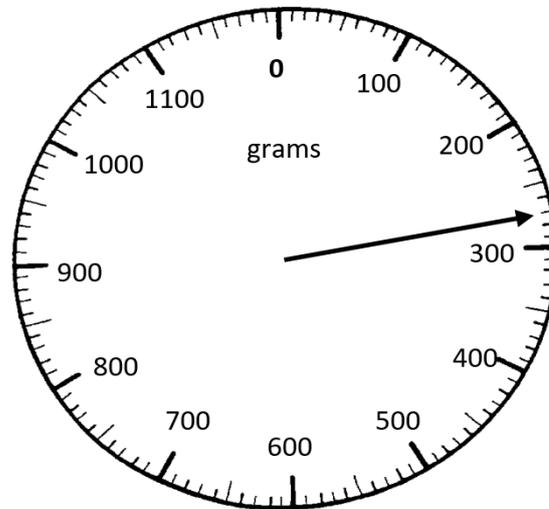
(A) 3      (B) 4      (C) 12      (D) 24      (E) 48

(A) 12      (B) 22      (C) 27      (D) 23      (E) 17





- 14 What weight is the arrow pointing to on these scales?



- (A) 207g      (B) 303g      (C) 270g      (D) 200.7g      (E) 252g

- 15 If the given shape below is a rectangle, what are the coordinates of the missing vertex?

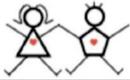


- (A) (2, 5)      (B) (5, 3)      (C) (7, 2)      (D) (2, 7)      (E) (5, 7)

- 16 A train left at 22:47 and arrived at its destination at 6:33 the following morning. How long did the journey take?

- (A) 5 hours 36 mins      (B) 6 hours 14 mins  
(C) 7 hours 46 mins      (D) 8 hours 26 mins  
(E) 9 hours 46 mins





17 Three pens cost £2.13. How much do 7 pens cost?

- (A) £4.16      (B) £6.39      (C) £14.91      (D) £4.97      (E) £21.30

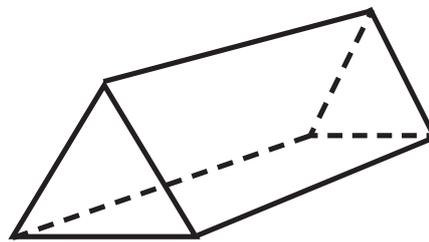
18 Look at this bus timetable.

A	06:55	---	07:30	08:50	09:15	09:50
B	07:05	07:30	07:46	09:00	09:24	09:58
C	07:16	07:46	07:56	09:09	09:36	10:07
D	07:23	08:04	08:04	09:16	09:43	10:16
E	07:34	08:17	08:14	09:21	09:52	10:21
F	07:38	08:20	08:19	09:25	09:58	10:26
G	07:50	08:35	08:30	---	10:10	10:45

If I reach Town B at 08:55 to board a bus, how many minutes will it take me to arrive at Town G?

- (A) 65 minutes    (B) 40 minutes    (C) 58 minutes    (D) 75 minutes    (E) 90 minutes

19 The cross-section of this triangular prism is an equilateral triangle with an area of  $12.5\text{cm}^2$ . The length of the triangular prism is 90mm. What is the volume of the triangular prism in  $\text{mm}^3$ ?

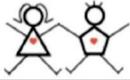


- (A)  $112.5\text{mm}^3$     (B)  $1125\text{mm}^3$     (C)  $11250\text{mm}^3$     (D)  $112500\text{mm}^3$     (E)  $1125000\text{mm}^3$

20 What is 0.3 as a percentage?

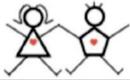
- (A) 0.3%      (B) 3%      (C) 30%      (D) 33%      (E) 300%





- 21 Which of these words is the same when rotated 180 degrees?
- (A) HUH      (B) DID      (C) POP      (D) SHUSH      (E) NON
- 22 Work out  $12 - 2 \times 2^2 + 5 \div 2 \times 6 - 4 =$
- (A) 131      (B) 15      (C) 48      (D) 1      (E) 37
- 23 One third of the pupils in a class are girls. The rest are boys. What is the ratio of girls to boys?
- (A) 1:2      (B) 1:3      (C) 1:4      (D) 3:1      (E) 1:1
- 24 What is the value of the digit 9 in the number 23.895?
- (A) nine hundred    (B) nine    (C) nine tenths    (D) nine hundredths    (E) nine thousandths
- 25 The most likely length of a pencil is:
- (A) 0.16cm      (B) 1.6cm      (C) 16cm      (D) 160cm      (E) 1600cm
- 26 I think of a number, triple it and then add 7. My answer is 61. What was my number?
- (A) 18      (B) 12      (C) 11      (D) 17      (E) 19

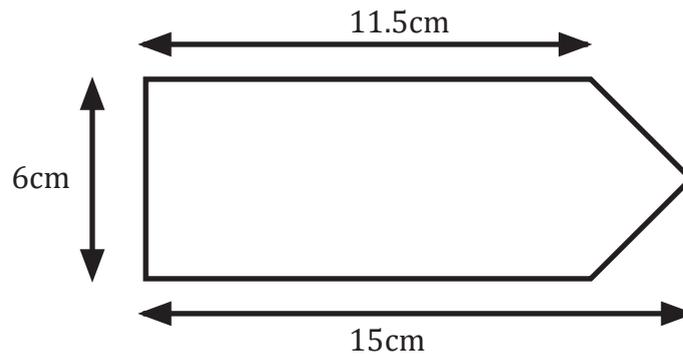




27 What is the sum of all the prime numbers from 1 to 25?

- (A) 87      (B) 100      (C) 99      (D) 90      (E) 78

28 What is the total area of this shape?



- (A)  $90\text{cm}^2$       (B)  $69\text{cm}^2$       (C)  $32.5\text{cm}^2$       (D)  $79.5\text{cm}^2$       (E)  $82.5\text{cm}^2$

29 A box can hold 325 marbles. How many marbles can 23 boxes hold?

- (A) 7475      (B) 1625      (C) 675      (D) 6500      (E) 7575

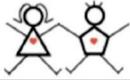
30 What is the volume of the cube whose surface area is  $2.16\text{ m}^2$ ?

- (A)  $0.216\text{ cm}^3$       (B)  $256\text{ cm}^3$       (C)  $0.216\text{ m}^3$       (D)  $0.256\text{ m}^2$       (E)  $256\text{ cm}^2$

31 Which list of numbers is in order of size?

<b>A</b>	1	2	-3	-4	5
<b>B</b>	5	-4	-3	2	1
<b>C</b>	-3	-4	1	2	5
<b>D</b>	-4	-3	1	2	5
<b>E</b>	-4	-3	5	2	1



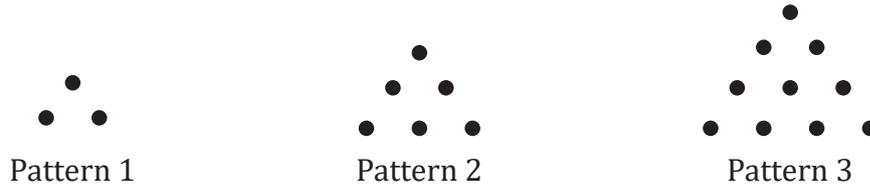


- 32 Sophie has  $y$  wrist-bands.  
She gives 5 of these wrist-bands to her friend.

What is the expression, in terms of  $y$ , for the number of wrist-bands Sophie now has?

- (A)  $5 - y$       (B)  $5y$       (C)  $y - 5$       (D)  $y + 5$       (E)  $\frac{y}{5}$

- 33 This is a sequence of patterns made from dots.



How many dots are there in Pattern 6?

- (A) 11      (B) 14      (C) 15      (D) 28      (E) 21

- 34 Which fraction is the largest?

- (A)  $\frac{11}{15}$       (B)  $\frac{4}{5}$       (C)  $\frac{9}{10}$       (D)  $\frac{13}{20}$       (E)  $\frac{53}{60}$

- 35 The diagram shows a rectangular floor.  
The length of the floor is 3 m. The width of the floor is 2 m.

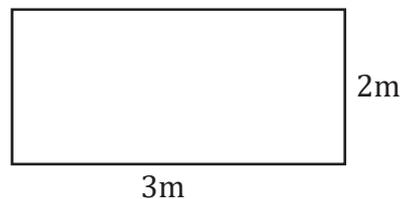


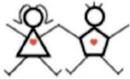
Diagram  
NOT  
to Scale

Janet is going to cover the floor with tiles. Each tile is a square of side 50 cm. Janet wants to cover the floor completely.

How many tiles does she need?

- (A) 24      (B) 12      (C) 10      (D) 20      (E) 6

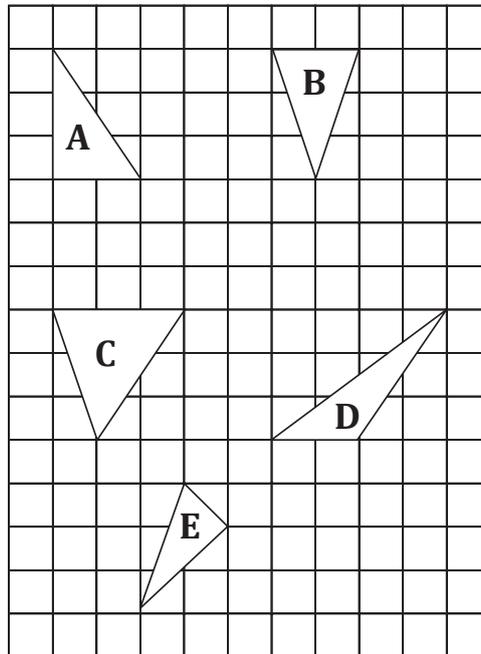




- 36** In April, 9646 people visited a castle. In May, 7154 people visited the castle. What is the difference between the number of people who visited the castle during April and May? Round your answer to the nearest 10.

(A) 2400      (B) 2490      (C) 2500      (D) 2510      (E) 2600

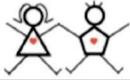
- 37** Which triangle is an isosceles triangle?



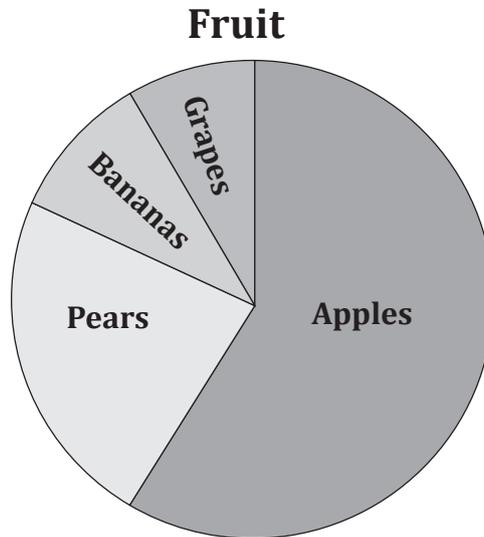
- 38** A bag had 35 sweets in it and 60% of them were removed. How many were left in the bag?

(A) 7      (B) 21      (C) 15      (D) 14      (E) 28





- 39 A class of 30 children were asked to name their favourite fruit. The results were put into the pie chart shown below.



■ Apples    ■ Pears    ■ Bananas    ■ Grapes

Which of the statements below is TRUE?

- (A) 12 children said apples                      (B)  $\frac{1}{2}$  of the children said pears  
(C) 25% of the children said bananas        (D) Less than 7 children said grapes  
(E) More girls said apples than boys

- 40 Which of these shapes is NOT a polygon?

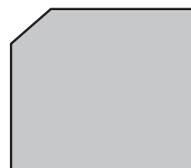
(A)



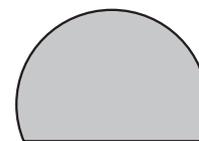
(B)



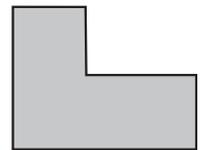
(C)

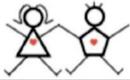


(D)

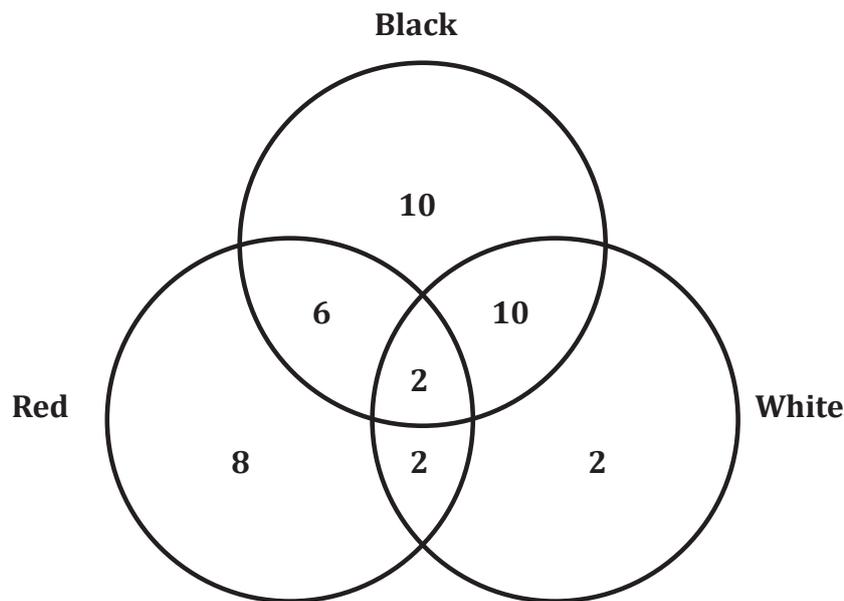


(E)





- 41 The diagram below shows the colours of cars that a class of 40 children has at home.



What is the probability that a student chosen at random has a red car at home?

- (A)  $\frac{8}{40}$       (B)  $\frac{1}{5}$       (C) 0.45      (D)  $\frac{18}{20}$       (E)  $\frac{1}{10}$

- 42 3 people go to the cinema. The normal ticket price is £9.50 per person. They have a voucher to get 10% discount off their tickets. How much do they save in total between them?

- (A) £9.50      (B) £10      (C) £0.95      (D) £2.85      (E) £3.15

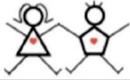
- 43 Which of these numbers is  $34^2$  ?

- (A) 916      (B) 1056      (C) 1156      (D) 1016      (E) 68

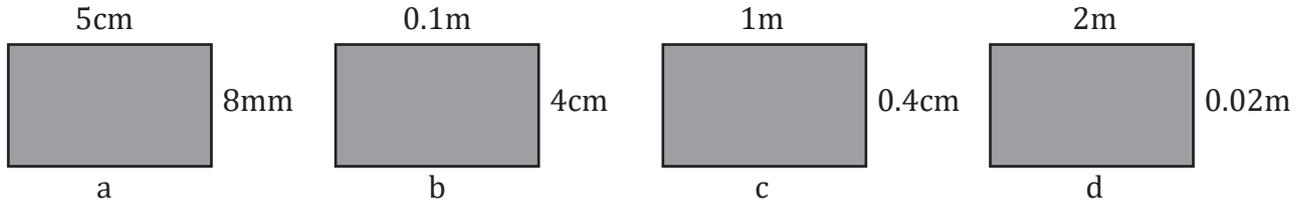
- 44 If you buy 12 pieces of ribbon that are each 23cm long, what is the total length of ribbon in meters?

- (A) 276cm      (B) 27.6m      (C) 2.76m      (D) 2760cm      (E) 27600mm



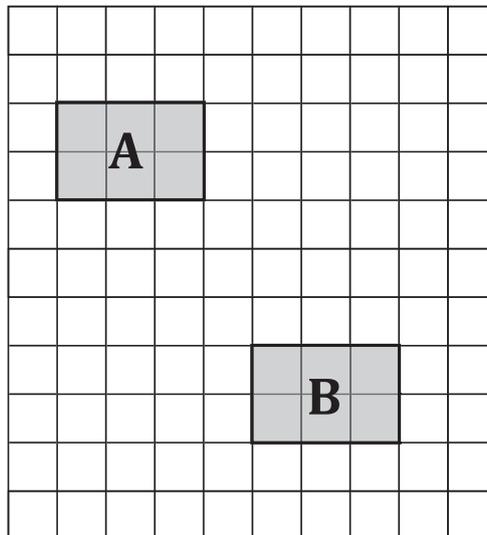


45 Which two rectangles have the same area? (NOT DRAWN TO SCALE)



- (A) a and b    (B) b and c    (C) c and d    (D) a and c    (E) b and d

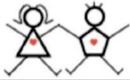
46 The rectangle has been translated from position A to position B.



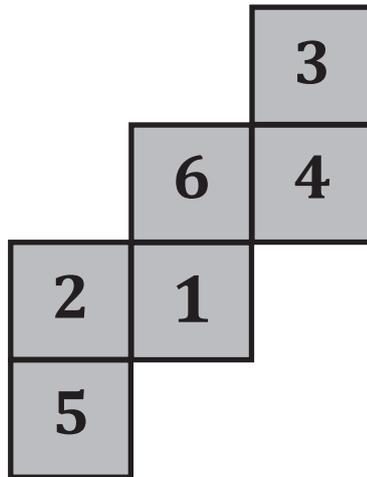
Which statement is correct?

- (A) The rectangle has moved 1 square to the right and 3 squares down  
(B) The rectangle has moved 1 square to the right and 5 squares down  
(C) The rectangle has moved 4 squares to the right and 3 squares down  
(D) The rectangle has moved 5 squares to the right and 4 squares down  
(E) The rectangle has moved 4 squares to the right and 5 squares down





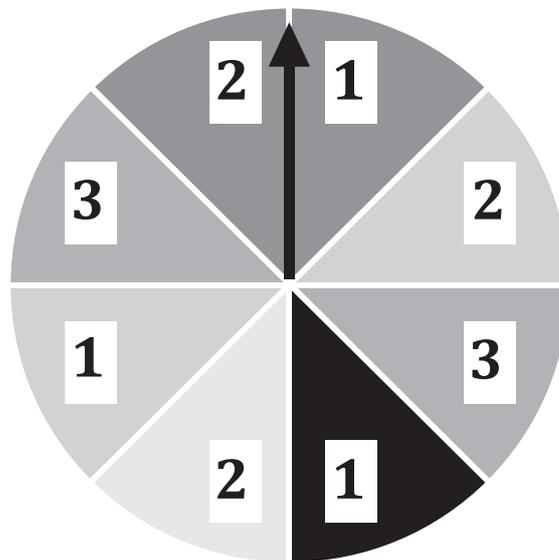
- 47 This is the net of a cube.



When it is made into a cube, which number will be opposite the 6?

- (A) 1      (B) 2      (C) 3      (D) 4      (E) 5

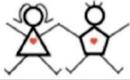
- 48 The spinner below is spun once. Each sector is the same area.



Which is most likely to happen?

- (A) It lands on a prime number      (B) It lands on a square number  
(C) It lands on a factor of 8      (D) It lands on a multiple of 3  
(E) It lands on a number less than 2





49 What is 2.5 divided by  $\frac{2}{5}$  ?

- (A) 10      (B) 1      (C) 2.5      (D) 5.5      (E) 6.25

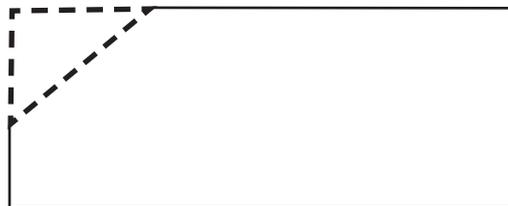
50 The score tests (out of 10) for 6 pupils are below.

5, 7, 3, 9, 8, 4

What is the mean score?

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

51 A triangle is cut from a corner of a rectangle shaped paper. The paper is now in a shape of pentagon with side lengths as 10cm, 8cm, 7cm, 5cm and 4cm in order. What is the area of the triangle which was cut out?

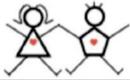


- (A)  $12 \text{ cm}^2$       (B)  $6 \text{ cm}^2$       (C)  $18 \text{ cm}^2$       (D)  $15 \text{ cm}^2$       (E)  $10 \text{ cm}^2$

52 Molly and Andy went to a candy shop and bought few candies. Andy took  $\frac{3}{5}$  of the candies and then Molly takes  $\frac{2}{3}$  of the remaining. They went to school and distributed the remaining chocolates between four of their friends giving 2 candies to each of them. What was the number of candies they bought?

- (A) 48      (B) 50      (C) 60      (D) 24      (E) 90

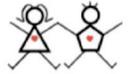




- 53 I have flipped a fair coin 3 times and got a head every time. What is the probability that I get a head on my 4<sup>th</sup> flip?
- (A)  $\frac{1}{2}$       (B)  $\frac{1}{4}$       (C)  $\frac{1}{3}$       (D)  $\frac{2}{3}$       (E)  $\frac{1}{6}$
- 54 What is  $12\frac{1}{2}\%$  of  $8^2$ ?
- (A) 16      (B) 24      (C) 12      (D) 20      (E) 8
- 55 An analogue clock is showing the time as 12:00pm. What will be the time after the minutes hand of the clock has rotated  $438^\circ$ ?
- (A) 1:08pm      (B) 1:24pm      (C) 2:08pm      (D) 1:13pm      (E) 2:18pm



11+ Maths SET Style (Pack 1) - Test Paper 2  
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"/>									
51	52	53	54	55					
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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