

PiAcademy

11 + Mathematics SET Style - Pack 1 Test Paper - 3

Instructions:

1. The time allowed is 45 minutes for 45 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.

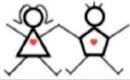


Do not turn the page until told to do so.



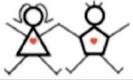
Stop working and await instructions.

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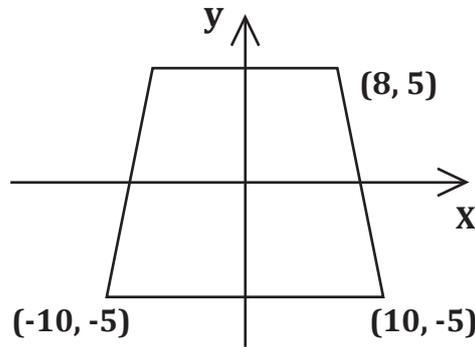


- 1 What is the next number in the sequence 3, 7, 12, 18, 25, 33...?
- (A) 42 (B) 40 (C) 43 (D) 45 (E) 47
- 2 Harry buys 3 packs of crisps for 40p each, a can of coke for £0.70 and a newspaper for £1.10. How much change will he get from £5?
- (A) £1.80 (B) 190p (C) 200p (D) £2.20 (E) £2.40
- 3 Two numbers are in the ratio 3:5. If 8 is subtracted from each of the numbers then the ratio between them is 1:2. What was the biggest number before the subtraction of 8?
- (A) 42 (B) 32 (C) 24 (D) 40 (E) 56
- 4 Alex shares 25 apples between himself and Tom, Fiona and Jake. If Alex takes 5 apples, Tom gets half of the remaining apples, and Fiona gets 70% of the other half, how many apples does Jake get?
- (A) 4 (B) 2 (C) 5 (D) 3 (E) 1
- 5 What is $4\frac{1}{4} + 0.75$?
- (A) 4.75 (B) 5 (C) $5\frac{1}{4}$ (D) $5\frac{3}{4}$ (E) 5.35



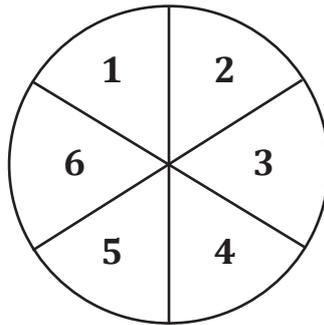


- 6 The following trapezium is symmetrical about the y-axis. What is the missing coordinate?



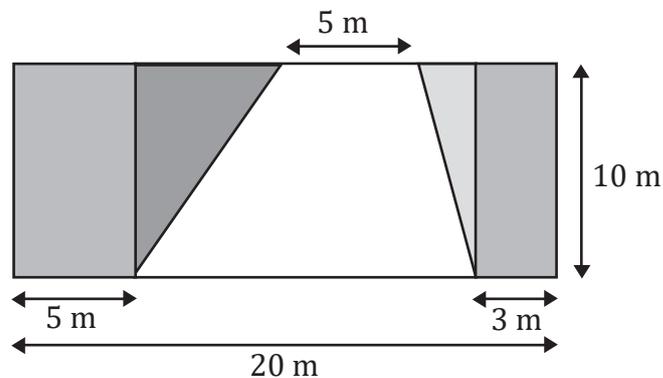
- (A) (8, -5) (B) (-8, 5) (C) (-5, -8) (D) (-5, 8) (E) (5, -5)

- 7 Sam spins the following roulette. What is the probability that he gets an odd number?



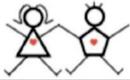
- (A) 50% (B) $\frac{1}{3}$ (C) $\frac{2}{3}$ (D) 0.25 (E) 0.2

- 8 A farmer has a plot of land represented by the shaded area in the diagram below. What is the area of the plot?



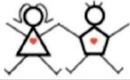
- (A) 125 m^2 (B) 100 m^2 (C) 150 m^2 (D) 170 m^2 (E) 115 m^2





- 9 If $a=5$, b is equal to a , and c is equal to the square of b , what is the value of $c - 2a$?
- (A) 10 (B) 35 (C) 20 (D) 25 (E) 15
- 10 Lisa is double the age of Adam, while Adam is 3 years younger than Tom. If Tom is 15, then how old is Lisa?
- (A) 18 (B) 24 (C) 20 (D) 14 (E) 34
- 11 How many two-digit numbers have exactly 3 factors?
- (A) 11 (B) 10 (C) 5 (D) 3 (E) 2
- 12 I have x pounds and y pence in my wallet. I buy a newspaper that costs $3y$ pence and a banana that costs $0.2x$ pounds. How much do I have left?
- (A) $80x - 2y$ pence (B) $0.8x$ pounds (C) $0.8x + 0.02y$ pounds
(D) $80x + 2y$ pence (E) $80x + 2y$ pounds
- 13 I reflect the point $(3, 2)$ in the x -axis. What are its new coordinates?
- (A) $(-3, -2)$ (B) $(-3, 2)$ (C) $(3, -2)$ (D) $(2, 3)$ (E) $(3, -3)$





14 Alex started working on his computer at 1.40pm. He worked till 6.30pm. During this time, he took four 20-minute breaks. How much time did he spend working on his computer?

- (A) 2 hours 30 minutes (B) 190 minutes (C) 3 hours 30 minutes
(D) 220 minutes (E) 250 minutes

15 The average of $x - 2$, $x + 2$ and $x + 3$ is:

- (A) $x + 1$ (B) $x - 1$ (C) x (D) $x - 2$ (E) $x + 3$

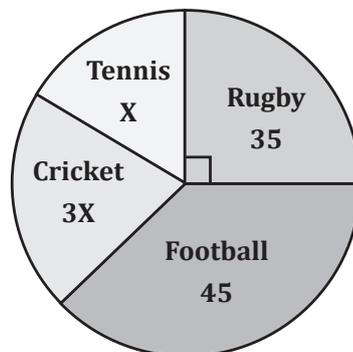
16 $33\frac{1}{3}\%$ of £3.33 is:

- (A) £1 (B) £1.01 (C) £0.33 (D) 99 pence (E) £1.11

17 35% of 50 is the same as $\frac{1}{2}$ of:

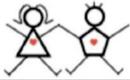
- (A) 100 (B) 25 (C) 40 (D) 35 (E) 45

18 There are 120 students in school. The pie chart shows the students' favourite sports. How many students have cricket as their favourite?

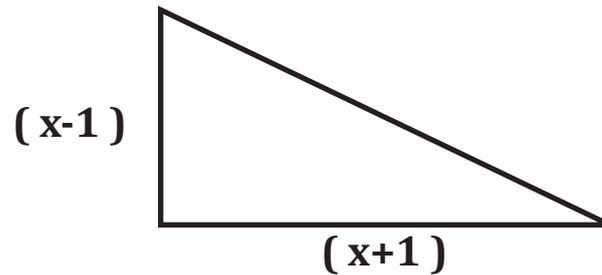


- (A) 15 (B) 45 (C) 20 (D) 40 (E) 30



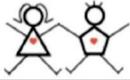


- 19 What is the area of this triangle?



- (A) $x^2 - 2x + 1$ (B) $\frac{1}{2}x^2 - \frac{1}{2}$ (C) $\frac{3}{2}x^2 - \frac{1}{2}$
- (D) $\frac{3}{2}x^2 - \frac{3}{2}$ (E) $x^2 - 1$
- 20 The scale of the map is 1:100 000. If a rectangular field is 10km in length and 5km in width, what will its area be on the map?
- (A) 5cm^2 (B) 25cm^2 (C) 500cm^2 (D) 50cm^2 (E) 125cm^2
- 21 A shirt was reduced in price from £25 to £20. What was the discount percentage offered?
- (A) 20% (B) 25% (C) 15% (D) 40% (E) 45%
- 22 What is the difference between two prime numbers closest to 4^3 ?
- (A) 5 (B) 6 (C) 7 (D) 8 (E) 9
- 23 I have 60 books. I arrange them on top, middle and bottom shelf in the ratio 1:3:6. How many books are on the middle shelf?
- (A) 24 (B) 10 (C) 18 (D) 36 (E) 38





24 Evaluate $9^2 - \sqrt{9}$

- (A) 72 (B) 78 (C) 63 (D) 68 (E) 88

25 What is $(18.43 \div 10) \times 1000$?

- (A) 1.843 (B) 184.3 (C) 1843 (D) 18430 (E) 0.1843

26 A digital clock shows the below time. What will be the time after $1\frac{1}{4}$ hours on a 12-hour clock?



- (A) 15:49 (B) 3:15 pm (C) 16:15 (D) 16:49 (E) 3:49 pm

27 Rectangles A and B have the same area. What could be the length of the rectangle B?

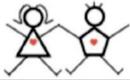


- (A) 2m (B) 10m (C) 5m (D) 5cm (E) 1m

28 5^z times 3 is equal 375. What is the value of z?

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





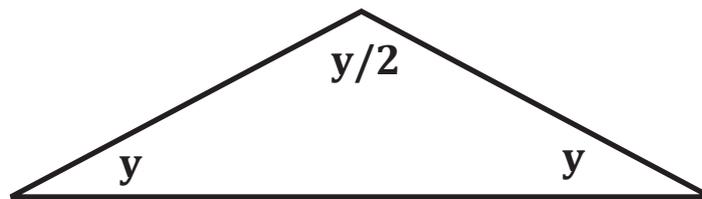
29 If x is a whole number and $5 < x < 10$, what is the largest possible value of x^2 ?

- (A) 81 (B) 90 (C) 100 (D) 64 (E) 110

30 What is the value of the larger angle between the hours hand and minutes hand of an analogue clock at quarter to 3?

- (A) 180° (B) 172.5° (C) 187.5° (D) 192.5° (E) 195°

31 What is the value, in degrees, of the angle y ?



- (A) 62° (B) 64° (C) 72° (D) 76° (E) 78°

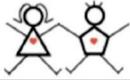
32 The exchange rate is £1 for \$1.14. How much do I get for £20?

- (A) \$20.80 (B) \$21.14 (C) \$21.80 (D) \$22.80 (E) \$23.80

33 John has two ropes, of length x metres and length $3x$ metres. He cuts the longer rope in half and throws away one half. Then he attaches the end of the remaining half to the end of the shorter rope. What is the total length?

- (A) $\frac{5}{2}x$ (B) $4x$ (C) $\frac{7}{2}x$ (D) $\frac{3}{2}x$ (E) $5x$





- 34 The time in London now is 4:23pm. The time in Moscow is 6:53pm. If it is 8:15 am in Moscow, what time is it in London?
- (A) 10:45 am (B) 6:45 am (C) 9:45 am (D) 5:45 am (E) 10:15am

- 35 Add the number of centimetres in 5 metres to the number of centimetres in 2 kilometres.
- (A) 500 (B) 200500 (C) 250000 (D) 5200 (E) 5500

- 36 Find the missing number A:

55	44	33
22	A	0
-11	-22	-33

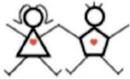
- (A) 11 (B) 9 (C) 8 (D) 10 (E) 12
- 37 Find the highest common factor of 120, 45 and 30.
- (A) 5 (B) 3 (C) 9 (D) 15 (E) 25

- 38 Which of the following is correct?

(A) $5\frac{3}{5} - 0.1 = \frac{14}{5}$ (B) $5\frac{2}{5} + 0.1 > 5.5$ (C) $5\frac{3}{5} = 5.5$

(D) $5\frac{1}{5} + 0.3 > 5.45$ (E) $5\frac{4}{5} < 5.80$





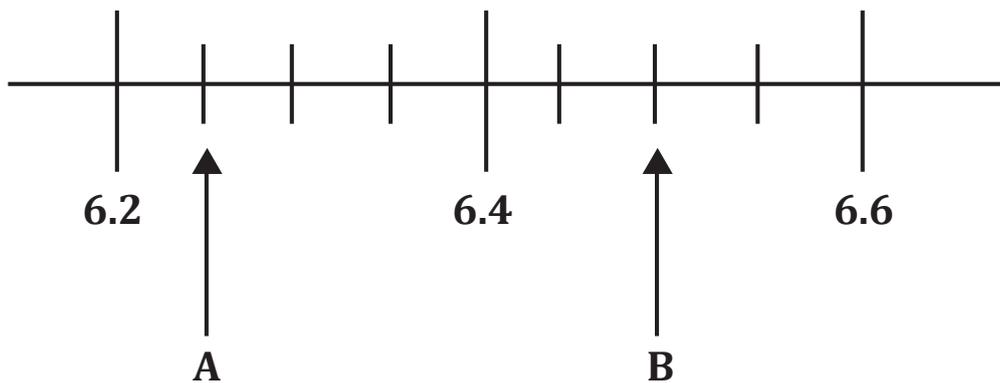
39 Each interior angle of a quadrilateral, apart from the smallest, is thrice the next smaller one. What is the size of the largest interior angle?

- (A) 270° (B) 243° (C) 225° (D) 300° (E) 180°

40 In a store 4 chocolates and 6 biscuits weigh 200g, 3 biscuits and 5 chocolates weigh 190g. How much do 3 chocolates and 3 biscuits weigh?

- (A) 150g (B) 164g (C) 104g (D) 130g (E) 120g

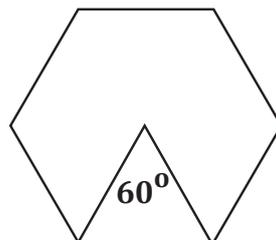
41



The arrows point to two numbers A and B. Find the sum $A + B$.

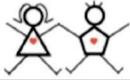
- (A) 12.75 (B) 12.6 (C) 12.85 (D) 12.45 (E) 13.45

42 The area of a regular hexagon is 180cm^2 . What is the area of the triangle shown?



- (A) 30cm^2 (B) 60cm (C) 12cm^2 (D) 40cm^2 (E) 90cm^2

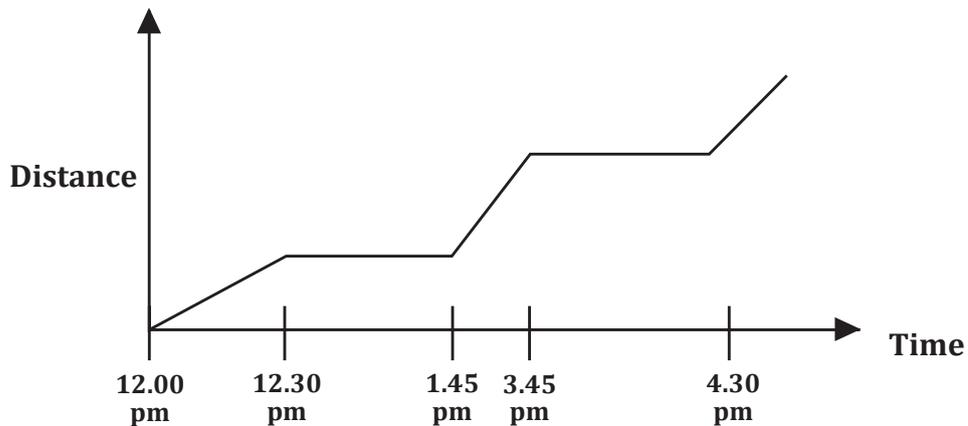




- 43 I am located on the point $(-2, 3)$ of a square grid. I have moved to the point $(5, -3)$. How many units have I moved horizontally?

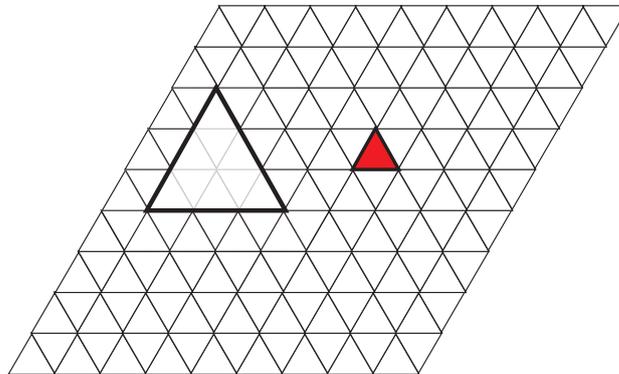
(A) 6 (B) 7 (C) 9 (D) 10 (E) 13

- 44 The distance-time graph below shows how much I drove in my car today, starting from midday and finishing at 5pm. I took several breaks. For how long was my car stationary?



- (A) 1 hour 30 mins (B) 1 hour 45 mins (C) 2 hours 45 mins
(D) 2 hours 30 mins (E) 2 hours

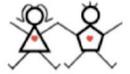
- 45 The area of the red triangle on the grid below is y . What is the area of the black triangle in terms of y ?



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



11+ Maths SET Style (Pack 1) - Test Paper 3
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"/>									
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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"/>									
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41	42	43	44	45					
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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