PiAcademy

11+ Mathematics
SET Style - Pack 2
Test Paper - 7

Symbols used:

Go to the next page.

Do not turn the page until told to do so.

Stop working and await instructions.
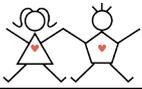
1 What is (888 - 88 + 8) ÷ 8?
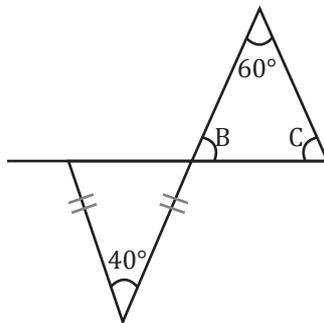
(A) 808   (B) 101   (C) 100   (D) 801   (E) 102

2 There are 5 red balls, 6 green balls and 2 black balls in a bag. Alex then puts 2 blue balls in the bag.

What is the probability of picking a red ball from the bag now?

(A) $\dfrac{5}{12}$ (B) $\dfrac{1}{4}$ (C) $\dfrac{1}{5}$ (D) $\dfrac{1}{3}$ (E) $\dfrac{1}{2}$

3

(Diagram not to scale)

What are the values of angles B and C respectively?

(A) 60° and 60°   (B) 50° and 70°   (C) 60° and 40°
(D) 70° and 50°   (E) 40° and 60°

4 Seven pencils cost the same as two pens. Ten pens cost the same as two notebooks. How many pencils can be bought for the same amount of money as two notebooks?

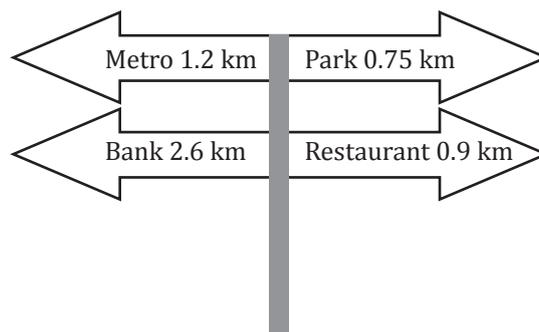(A) 14   (B) 10   (C) 21   (D) 28   (E) 35

5 What is the value of 4 + 6 × 7 × 0 - 2?

(A) 44   (B) 14   (C) 2   (D) 4   (E) 10

6 Nathan lost a quarter of his weight over the past year.
Which of the following represents an equivalent weight loss?

(A) $\dfrac{3}{15}$ (B) $\dfrac{2}{10}$ (C) $\dfrac{4}{12}$ (D) $\dfrac{5}{20}$ (E) $\dfrac{2}{6}$

7

Metro 1.2 km   Park 0.75 km
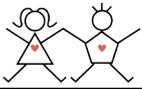Bank 2.6 km   Restaurant 0.9 km

How many metres is it from the metro to the restaurant?

(A) 2100 m   (B) 2.1 m   (C) 1200 m   (D) 1.2 m   (E) 900 m

8 Henry is 40 years old. He is 5 times as old as his daughter Sara.
How old is Sara?

(A) 10 years (B) 12 years (C) 8 years   (D) 11 years (E) 14 years

9 A car takes 30 minutes to travel 60 km. How far will it travel in 2.5 hours?

(A) 250 km (B) 500 km (C) 200 km (D) 300 km (E) 750 km

10 In a sale, a laptop costs £840 after a 30% discount.
What was the original price of the laptop?

(A) £1000 (B) £1400 (C) £1200 (D) £1800 (E) £1500

11 Which of the following statements is correct?

(A) $(12 \div 2) \div 3 = (14 \div 2) \div 14$ (B) $(12 \div 2) \times 3 = (14 \times 2) \div 14$
(C) $(12 \times 2) \div 3 = (14 \times 2) \div 14$ (D) $(12 \div 2) \div 3 = (14 \times 2) \div 14$
(E) $(12 \div 2) \times 3 = (14 \div 2) \div 14$

12 Matt went to watch a movie that was 2.5 hours long. The movie was so boring that he only stayed for 20% of it.
How many minutes of the movie did he miss?

(A) 100 (B) 110 (C) 120 (D) 130 (E) 90
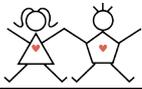
13 Mitch completed two-fifths of his morning run then stopped for a two minute break. He then completed one third of the remaining distance before needing another break. What fraction of the run did Mitch have left?

(A) $\dfrac{1}{5}$ (B) $\dfrac{2}{5}$ (C) $\dfrac{2}{3}$ (D) $\dfrac{3}{4}$ (E) $\dfrac{3}{5}$

14 12 barbie dolls cost £275.40. How much does one barbie doll cost?

(A) £27.95 (B) £22.95 (C) £25.95 (D) £24.95 (E) £29.25

15 It takes John 3 hours and 20 minutes to cycle 25 miles at a steady pace. If John decides to cycle for 1.5 hours at the same speed, how far would he cycle?
(Hint: Take 1 mile = 1.6 km)

(A) 11.25 km   (B) 18 km   (C) 12 km
(D) 18.15 km   (E) 12.25 km

16 Two numbers have a sum of 68. The larger of the numbers three times the smaller. What are the two numbers?

(A) 12 and 56   (B) 11 and 57   (C) 15 and 53
(D) 14 and 42   (E) 17 and 51

17 Which of these numbers has a 7 in the hundredths place?

(A) 1.7256   (B) 2.4576   (C) 0.7767
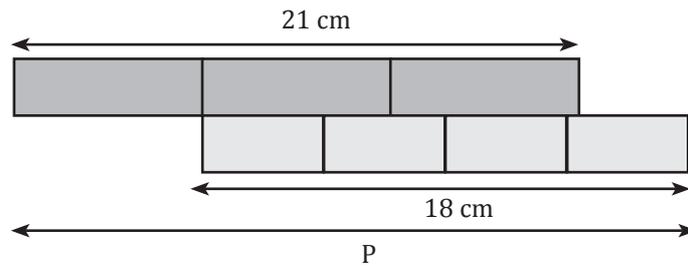(D) 0.7878   (E) 1.4567

(18)

21 cm

18 cm

P
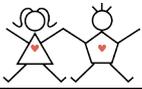
Diagram not to scale

What is the value of P?

(A) 25 cm (B) 24 cm (C) 24.5 cm (D) 25.5 cm (E) 22 cm

(19) A rectangle measures 3.2 cm by 1.6 cm. What is its perimeter?

(A) 4.8 cm (B) 6.9 cm (C) 9.6 cm (D) 6.4 cm (E) 12.4 cm

(20) Vanessa thinks of a number. She adds 4, subtracts 3 and then divides by 5. The resulting number is 4. What number was Vanessa thinking of?

(A) 5 (B) 1 (C) 11 (D) 17 (E) 19

(21) The diagram shows a regular hexagon.

$6a + 8$

12 cm
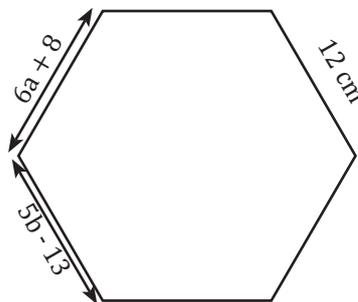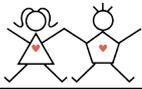
$5b - 13$

Diagram not to scale

What are the values of a and b respectively ?

(A) 0.5 and 5   (B) 0.55 and 5   (C) 5 and 0.66
(D) 0.66 and 5   (E) 1 and 5

(22) The number of cars manufactured in a plant in the last 3 years is 4675.
Round this number to the nearest 10.

(A)   4700   (B)   5000   (C)   4680   (D)   4670   (E)   4800

(23) Find the value of

$$\frac{6}{15} - \frac{7}{15} + \frac{1}{15} + \frac{3}{15} + \frac{4}{15} + \frac{2}{15}$$

Give your answer in its simplest form.

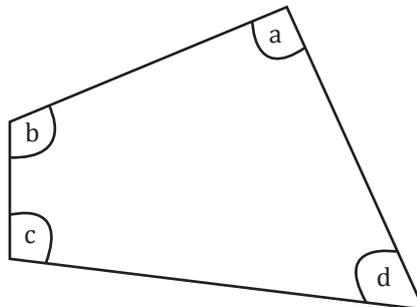(A) $\frac{3}{5}$ (B) $\frac{2}{3}$ (C)   13   (D) $\frac{3}{4}$ (E) $\frac{4}{5}$
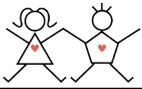
(24)

Diagram not to scale

For the quadrilateral shown above:
c = 2d ; a+b = 210°
What is the value of angle c?

(A)   50°   (B)   150°   (C)   100°   (D)   55°   (E)   60°

25 In a fruit smoothie weighing 126 g, the ratio of fruit to milk is 5:13.
What is the weight of the fruit in the smoothie?

(A) 91 g   (B) 25 g   (C) 45 g   (D) 35 g   (E) 51 g

26 A shop sells onions in small and large boxes. A small box holds 8 kg onions and
a large box holds 15 kg onions. Steve buys 4 large boxes and some small boxes resulting
in a total of 100 kg onions. How many small boxes does he buy?
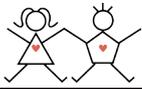
(A) 8   (B) 4   (C) 5   (D) 7   (E) 10

27

| 7 | 3 | 6 | 4 | 5 |

Choose three cards from those shown above to make the following sum correct.

$$\boxed{a}\ \boxed{b}\ \boxed{5} + \boxed{c}\ \boxed{7} = 502$$

(A) a=3, b=4 and c=5   (B) a=3, b=4 and c=6
(C) a=3, b=6 and c=4   (D) a=4, b=6 and c=3
(E) a=6, b=4 and c=3

(28) Alice thinks of number. Four-sevenths of the number is 128. What is six-eighths of the number?

(A)   168   (B)   128   (C)   224   (D)   124   (E)   156

(29) I am 54 years old and I am three times as old as my daughter. What will be the difference between our ages in 22 years time?

(A)   56 years   (B)   18 years   (C)   36 years
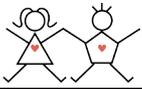(D)   22 years   (E)   24 years

(30) What is the lowest common multiple of 2, 3 and 9?

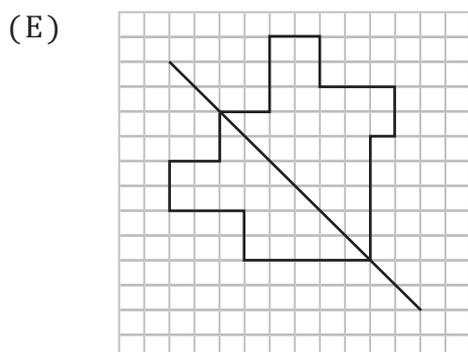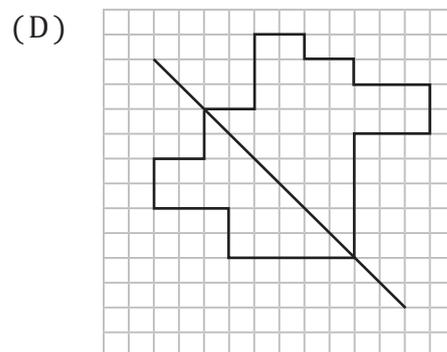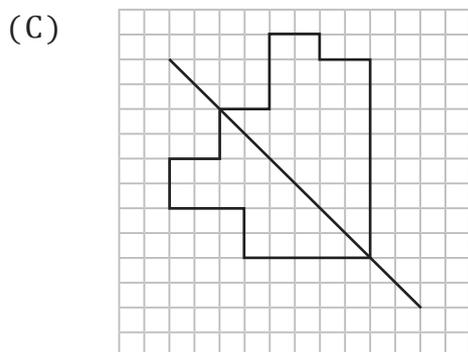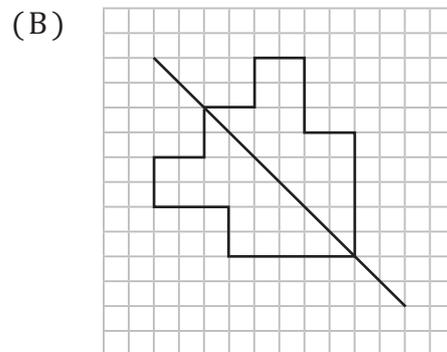(A)   54   (B)   36   (C)   12   (D)   18   (E)   27
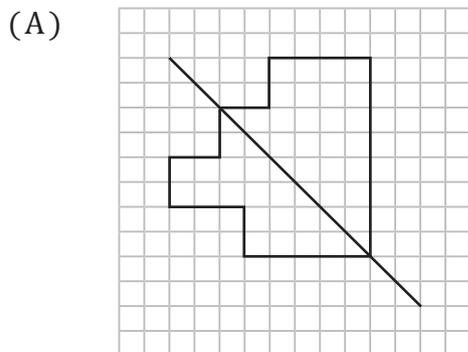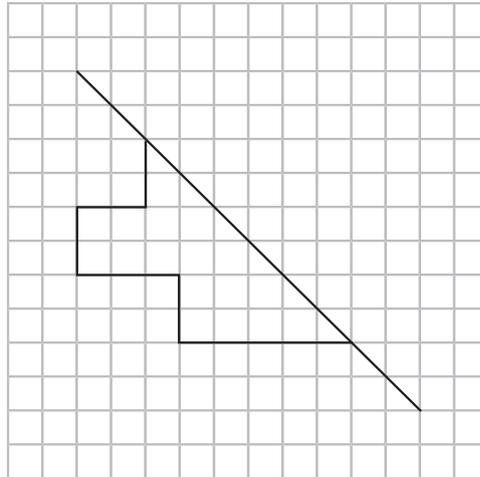
(31) The scores of seven students in a maths test are 22, 18, 23, 18, 19, 24 and 30.
Find the mean and median of these scores.
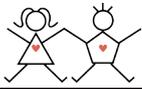
(A)   22 and 18   (B)   22 and 22   (C)   22 and 23
(D)   23 and 22   (E)   18 and 23

32 Which diagram shows the correct reflection of the image below in the given line of symmetry?

(A)

(B)

(C)

(D)

(E)

33 Adam's age is a multiple of 9 this year. In 3 years it will be a multiple of 6. He is more than 30 years old and less than 60 years old. How old is Adam now?

(A) 36　　　(B) 54　　　(C) 63　　　(D) 45　　　(E) 27

34 In the figure shown below, the width of the shaded rectangle is a quarter of the side length of the square.
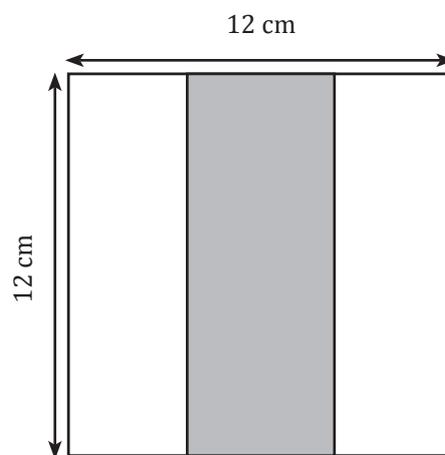
12 cm

12 cm

Diagram not to scale

What is the total area of the unshaded regions?

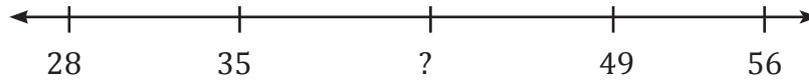(A) 124 cm²　　　　　(B) 100 cm²　　　　　(C) 144 cm²

(D) 118 cm²　　　　　(E) 108 cm²

35 On Friday, Ana went to the shop and bought 120 disposable hand towels. She used 8 hand towels each day starting from Friday. On which day did Ana use the last hand towel?

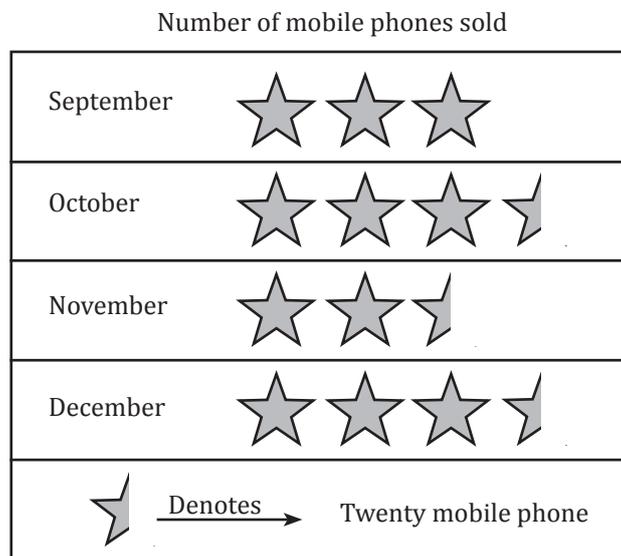(A) Thursday　　　　　(B) Sunday　　　　　(C) Friday

(D) Wednesday　　　　(E) Monday
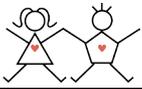
36 What is the missing number on this number line?

| 28 | 35 | ? | 49 | 56 |

(A)   42   (B)   40   (C)   45   (D)   48   (E)   44

37 This chart shows the number of mobile phones sold by a shop in four months.

Number of mobile phones sold

September	★ ★ ★
October	★ ★ ★ ⅟
November	★ ★ ⅟
December	★ ★ ★ ⅟

Denotes → Twenty mobile phone
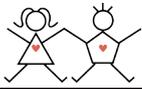
How many more mobile phones were sold in December compared to November?

(A)   20   (B)   40   (C)   10   (D)   15   (E)   30

38 Melinda pours 40 ml of milk out of a bottle containing 2.5 litres. How much milk is left in the bottle?

(A)   2460 L   (B)   2.46 ml   (C)   2.4 ml   (D)   2.46 L   (E)   2.5 L

(39) Andrew moves the circular marker 3 cells left, then 2 cells up, then 2 cells right and then finally 4 cells down.


In what cell does Andrew finally place the marker?

(A)   B3   (B)   C4   (C)   B5   (D)   C3   (E)   C5

(40) The mean score of David's five English tests is 72%. After his sixth test the mean decreases to 70%. What does David score in his sixth test?

(A)   60%   (B)   70%   (C)   64%   (D)   71%   (E)   68%

(41) Tim turns 55 degrees clockwise, then 160 degrees anticlockwise and then finally 45 degrees clockwise. If Tim wants to return to his original position by turning through the smallest possible angle, in which direction should he turn and what should the angle be?

(A)   Anticlockwise, 60°   (B)   Clockwise, 60°   (C)   Clockwise, 30°
(D)   Anticlockwise, 30°   (E)   Anticlockwise, 90°

(42) 70 children were asked if they liked pizza or burger. The diagram below was drawn based on the results. How many children like neither pizza nor burger?
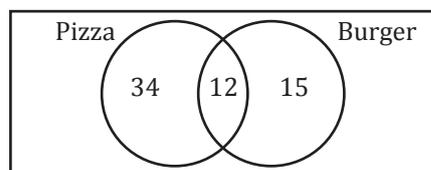
(A)   10   (B)   12   (C)   9   (D)   8   (E)   13
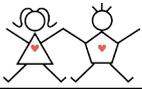
43 When frozen, a given quantity of water will increase in volume by $\dfrac{1}{12}$. If a full container of ice is melted, what fraction of the container will the water fill?
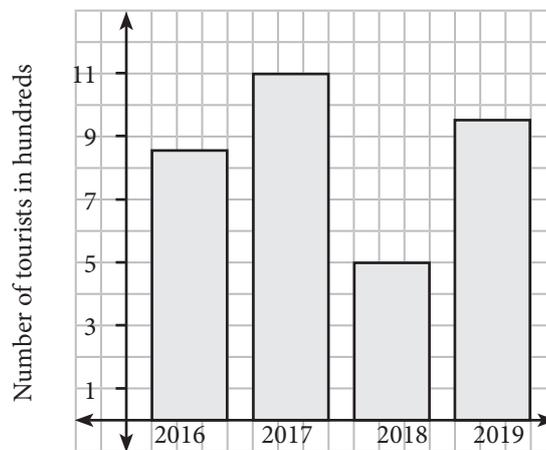
(A) $\dfrac{11}{12}$ (B) $\dfrac{12}{13}$ (C) $\dfrac{11}{13}$

(D) $\dfrac{12}{14}$ (E) $\dfrac{11}{14}$
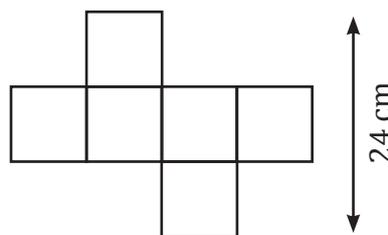
44 Gal draws this graph to show the number of visitors to her resort in four years.
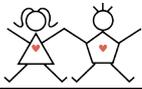

Find the mean number of visitors to Gal's resort over the four years.

(A) 950   (B) 1000   (C) 850   (D) 900   (E) 800

45 The picture below shows the net of a cube Calculate the total surface area of the cube made from this net.

(A) 256 cm² (B) 384 cm² (C) 128 cm² (D) 64 cm² (E) 196 cm²

46 Cameron has £150. He spends 10% of it on tickets for a football match and 10% of the remaining money to buy clothes. How much money is Cameron left with?

(A) £130 (B) £120 (C) £121.50

(D) £125.50 (E) £100

47 Two books and three pens cost £4.45. If a book costs £1.50 more than a pen, what is the cost of a book?

(A) £0.90 (B) £1.79 (C) £1.90 (D) £2.50 (E) £1.25

48 Meg receives £120 pocket money each month. This month, she spent £20 on food. She then put a fifth of the remaining money in her savings. How much money does she still have to spend?

(A) £96 (B) £100 (C) £24 (D) £80 (E) £95

49 Here is a sequence:

5 12 19 26 33

If the sequence continues, what is the next number?

(A) 36 (B) 39 (C) 45 (D) 42 (E) 40

50 Jonty started playing at 9:36 am and finished at 12:15 pm.
How long did Jonty spend playing?

(A) 1 hour 40 minutes (B) 2 hours 39 minutes

(C) 1 hour 39 minutes (D) 2 hours 10 minutes

(E) 2 hours 24 minutes

11+ Maths SET Style (Pack 2) - Test Paper 7
ANSWER MARKING SHEET

Name:

Date:

School Name:

Please mark boxes with a thin horizontal line like this -▭ .

1 A B C D E
2 A B C D E
3 A B C D E
4 A B C D E
5 A B C D E
6 A B C D E
7 A B C D E
8 A B C D E
9 A B C D E
10 A B C D E

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

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

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

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

For Parents use only

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

Comments: --