

Circle the correct answer for each question.

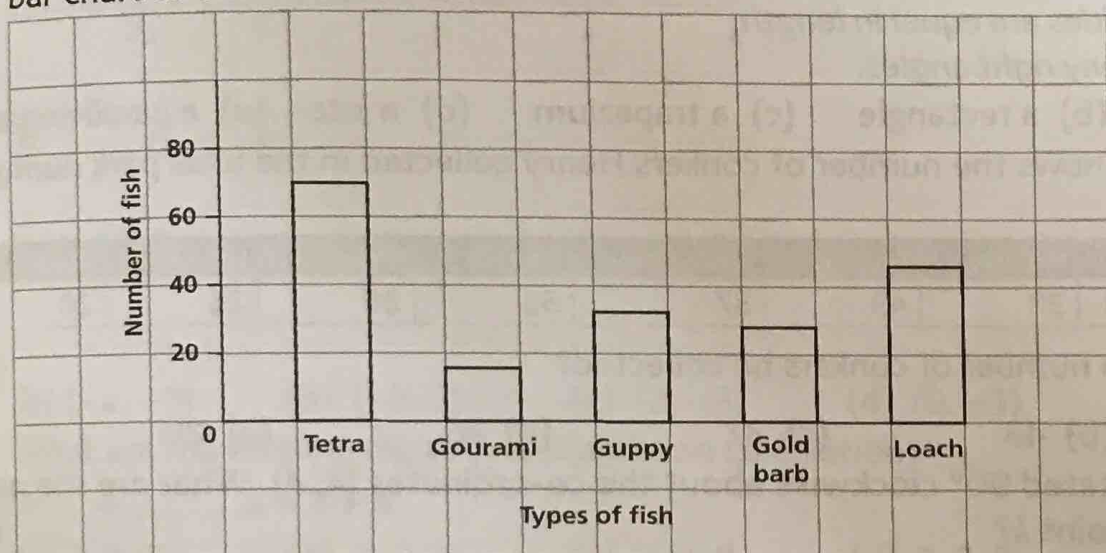
- 1 What number should go in the box? (2)  
 $14 + 14 + 14 + 14 + 14 + 14 = \boxed{\phantom{000}} \times 12$ 

(a) 14                      (b) 84                      (c) 12                      (d) 7                      (e) 16
- 2 Philippa has a party with 11 friends. They share 2 birthday cakes equally among themselves. What fraction of the birthday cakes does each person receive? (2)  

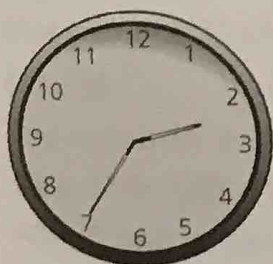
(a)  $\frac{2}{11}$                       (b)  $\frac{1}{5}$                       (c)  $\frac{1}{6}$                       (d)  $\frac{11}{12}$                       (e)  $\frac{1}{12}$
- 3 Which of these statements is correct? (1)  

(a)  $9.6 > 9\frac{3}{5}$                       (b)  $9.6 < 9\frac{1}{2}$                       (c)  $9.6 = 9\frac{1}{2}$                       (d)  $9.6 = 9\frac{3}{5}$                       (e)  $9.6 < 9\frac{2}{5}$
- 4 The profit made by Flying Engines Plc was four hundred and eighteen thousand and fifty-eight pounds. What is the amount in figures? (1)  

(a) £418 508                      (b) £418 058                      (c) £408 508                      (d) £400 188                      (e) £136 418
- 5 A local pet shop sells tropical fish. A group of students counted the fish and plotted a bar chart to show the results.

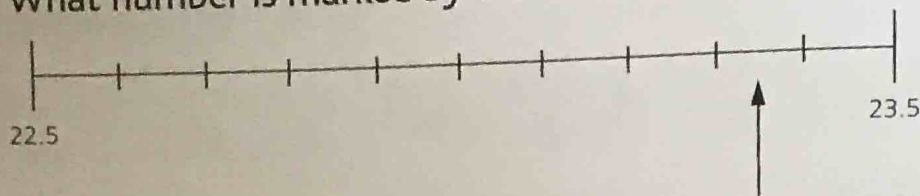


- How many more tetras are there than gold barbs? (2)
- (a) 40                      (b) 35                      (c) 30                      (d) 45                      (e) 25
- 6 The analogue clock shows the time in the afternoon. What is the equivalent digital time? (1)



- (a) 03:25                      (b) 02:25                      (c) 14:45                      (d) 14:35                      (e) 15:35

7 What number is marked by the arrow on the scale below?



(1)

- (a) 23.4      (b) 23.3      (c) 23.35      (d) 23.45      (e) 22.9

8  $952 \times 32 = 30\,464$

What is  $952 \times 16$ ?

(2)

- (a) 7876      (b) 15464      (c) 15352      (d) 15928      (e) 15232

9 A 2-litre bottle of double strength blackcurrant squash is mixed with 6 times as much water to make diluted squash.

How many 250-millilitre glasses can be filled with the diluted squash?

(4)

- (a) 56      (b) 48      (c) 32      (d) 64      (e) 24

10 What is  $3 - 1.7$ ?

(1)

- (a) 2.2      (b) 1.3      (c) 1.2      (d) 2.3      (e) 1.7

11 What shape do these clues describe?

(1)

- I have two pairs of parallel sides.
- My opposite sides are equal in length.
- I do not have any right angles.

- (a) a square      (b) a rectangle      (c) a trapezium      (d) a kite      (e) a parallelogram

12 The table below shows the number of conkers Henry collected in the local park during one week.

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of conkers	32	43	37	33	26	26	20

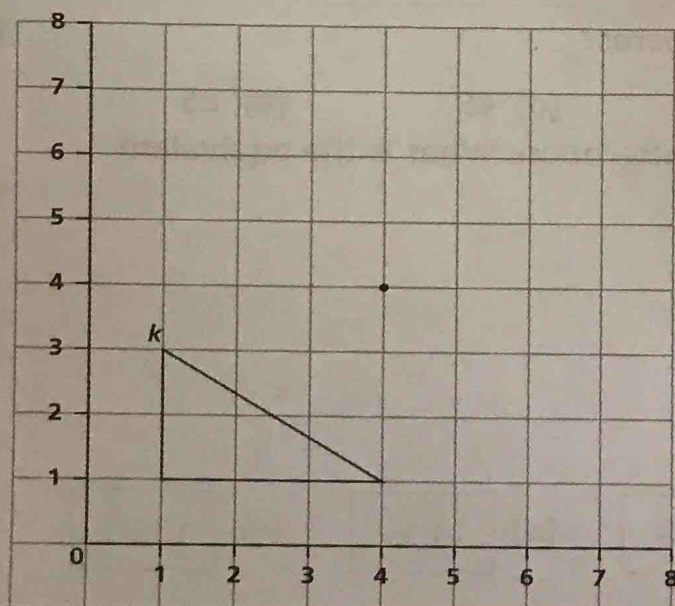
What is the mean number of conkers he collected?

(2)

- (a) 31      (b) 43      (c) 32      (d) 26      (e) 20

13 The triangle is rotated  $90^\circ$  clockwise about the co-ordinates (4, 4). What are the new co-ordinates of point  $k$ ?

(1)



- (a) (5, 1)      (b) (7, 5)      (c) (3, 7)      (d) (1, 4)      (e) (3, 4)



14 Neil used the function machine below.

Input  $\rightarrow$   $\boxed{\times 8} \rightarrow \boxed{- 2} \rightarrow \boxed{\div 2} \rightarrow$  Output

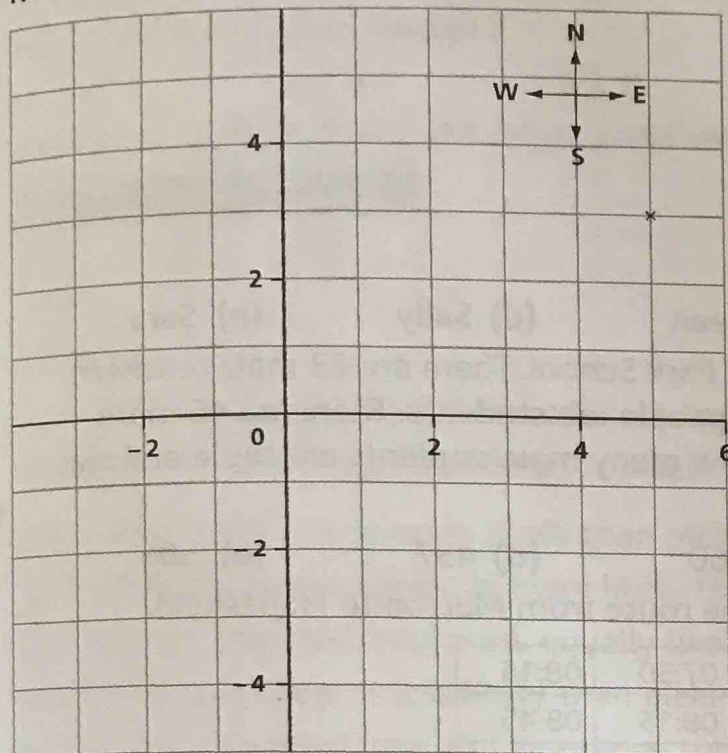
If he used  $W$  as his input, what was his output?

- (a)  $8W - 2$  (b)  $8W - 1$  (c)  $4W - 2$  (d)  $4W - 1$  (e)  $8W - \frac{1}{2}$

15 A square has co-ordinates (3, 3), (7, 3), (3, 7) and (7, 7). What are the co-ordinates of the middle point of the square?

- (a) (4, 3) (b) (5, 6) (c) (5, 5) (d) (6, 6) (e) (3, 6)

16 A mouse starts at (5, 3) on the grid below. He follows the lines of the grid and moves 3 squares west and then 6 squares south. Where does he stop?



- (a) (-2, -3) (b) (-3, 2) (c) (2, -3) (d) (0, -1) (e) (0, 2)

17 What are the missing digits in this addition calculation?

$$9 \_ + \_ = 375$$

- (a) 2, 3, 7 (b) 2, 2, 7 (c) 3, 2, 8 (d) 2, 2, 8 (e) 3, 2, 7

18 What is  $5280 \div 4$ ?

- (a) 1200 (b) 1320 (c) 1070 (d) 1700 (e) 1120

19 What is  $2.5 \times (3.5 - 1.5) \times 3$ ?

- (a) 7.5 (b) 37.5 (c) 12 (d) 15 (e) 30.5

20 In a class of 25 children, 3 arrive late. What percentage of the children is this?

- (a) 3% (b) 30% (c) 12% (d) 6% (e) 20%

21 The numbers in this sequence increase by the same amount each time.

168, 174, 180, 186, 192, ...

Which one of these numbers will appear in this sequence?

- (a) 468 (b) 560 (c) 586 (d) 704 (e) 803

22 Mr Panther has forgotten the code for his safe. He knows that:

- The code is a three-digit number below 200
- The number appears in the 8 times table.
- The three digits add up to 13

Which of these is the code for the safe?

- (a) 175 (b) 139 (c) 168 (d) 184 (e) 256 (3)

23 What is the cost of 24 mugs each costing 99p?

- (a) £24.24 (b) £36.24 (c) £23.76 (d) £24.76 (e) £20.76 (3)

24 Which child is closest to 15 months old on 15 October 2015?

Child	Date of birth
Peter	11/08/14
Richard	21/07/14
Sean	20/11/14
Sally	26/10/14
Sara	05/02/15

- (a) Peter (b) Richard (c) Sean (d) Sally (e) Sara (2)

25 There are a total of 968 people at Royal Park School. There are 23 male teachers and 25 female teachers. The rest of the people are students. There are 46 more male students than female students. How many male students are there at Royal Park School?

- (a) 483 (b) 484 (c) 460 (d) 437 (e) 506 (5)

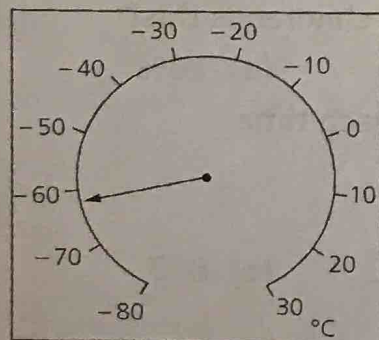
26 Below is part of the bus timetable for the route from Marton to Hopesfield.

Marton	06:10	07:15	07:40	07:50	08:15
Rickington	06:35	07:43	08:11	08:15	08:45
Barton	06:49	08:01	—	08:37	09:10
Brilliton	06:58	08:14	—	08:55	09:30
Chapplesmith	07:13	08:32	—	09:16	09:55
Hopesfield	07:26	08:49	08:59	09:35	10:15

It takes 5 minutes to walk from the bus stop to the town centre in Hopesfield. At what time should Tanya catch the bus from Marton if she wants to be in Hopesfield Town Centre at 9 o'clock?

- (a) 06:10 (b) 07:15 (c) 07:40 (d) 07:50 (e) 08:15 (2)

27 What temperature is shown on this thermometer?



- (a)  $-61^{\circ}\text{C}$  (b)  $-65^{\circ}\text{C}$  (c)  $-62^{\circ}\text{C}$  (d)  $62^{\circ}\text{C}$  (e)  $61^{\circ}\text{C}$  (1)



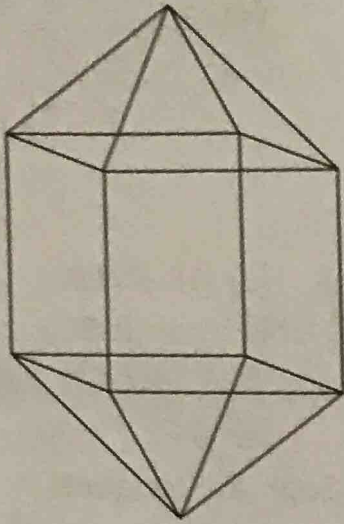
- 28 If I quadruple a number ( $n$ ) and then take away 7, I get the same result as adding 23 to the same number ( $n$ ). What is my original number ( $n$ )? (3)  
 (a) 5 (b) 7 (c) 16 (d) 10 (e) 30
- 29 Albert has two different number cards.  
 When he adds the numbers on the cards, the result is 26  
 When he multiplies the two numbers, the result is 144  
 What are the two numbers on the number cards? (2)  
 (a) 13 and 13 (b) 12 and 14 (c) 16 and 10 (d) 17 and 11 (e) 18 and 8
- 30 When Lennox thinks of a number, divides it by 7 and then adds 24, his result is 30  
 What was his original number? (3)  
 (a) 54 (b) 42 (c) 8 (d) 49 (e) 61
- 31 The two-way table shows the colours and varieties of flowers in Sophia's bouquet.

	Roses	Tulips
Red	9	10
Yellow	6	7
Orange	7	5

- Without looking, Sophia picks one flower to give to her mum.  
 Which of the following statements is true? (1)  
 (a) Picking a red rose is more likely than picking a red tulip.  
 (b) Picking an orange flower is more likely than picking a yellow flower.  
 (c) Picking a rose and a tulip are equally likely.  
 (d) Picking a red rose is less likely than picking a yellow rose.  
 (e) Picking an orange rose and an orange tulip are equally likely.
- 32 Mohammed ran four 10 km races. His times are listed below.  
 36 minutes 30 seconds      34 minutes 10 seconds  
 38 minutes 45 seconds      34 minutes 15 seconds  
 What is his mean time? (2)  
 (a) 36 minutes 25 seconds      (b) 35 minutes 40 seconds      (c) 35 minutes 55 seconds  
 (d) 35 minutes 25 seconds      (e) 37 minutes 40 seconds
- 33 Jenny owns two square fields with a total area of  $14\,500\text{ m}^2$ . The first field has an area of  $6400\text{ m}^2$ . What is the side length of the second field? (2)  
 (a) 41 m (b) 121 m (c) 90 m (d) 65 m (e) 120 m
- 34 A class has  $x$  boys and  $y$  girls. There are 5 more boys than girls.  
 What is the value of  $y$ ? (1)  
 (a)  $y = 5x$  (b)  $y = x + 5$  (c)  $y = x - 5$  (d)  $y = x$  (e)  $y = 2x$
- 35 A 5p coin has a mass of 3.25 g.  
 A bag of 5p coins has a mass of 650 g.  
 How many 5p coins are in the bag? (1)  
 (a) 20 (b) 50 (c) 100 (d) 200 (e) 250

36 Harry made the shape shown from sticks. He wants to fill each face of the shape with cardboard. How many of each cardboard shape does Harry need?

(1)



- (a) 4 squares and 8 triangles
- (b) 4 squares and 4 triangles
- (c) 4 squares and 6 triangles

- (d) 5 squares and 5 triangles
- (e) 5 squares and 8 triangles

37 Paula enjoys running. For every 5 half-marathons that she runs, she runs 3 marathons. How many half marathons has she run when she has run 15 marathons?

(3)

- (a) 15
- (b) 12
- (c) 20
- (d) 25
- (e) 9

38 What is  $78 \times 386 + 386 \times 22$ ?

(2)

- (a) 8492
- (b) 30 108
- (c) 38 600
- (d) 77 200
- (e) 98 468

39 What is  $6 \times 4 - 5 \times 3$ ?

(3)

- (a) 57
- (b) 9
- (c) 39
- (d) 66
- (e) -18

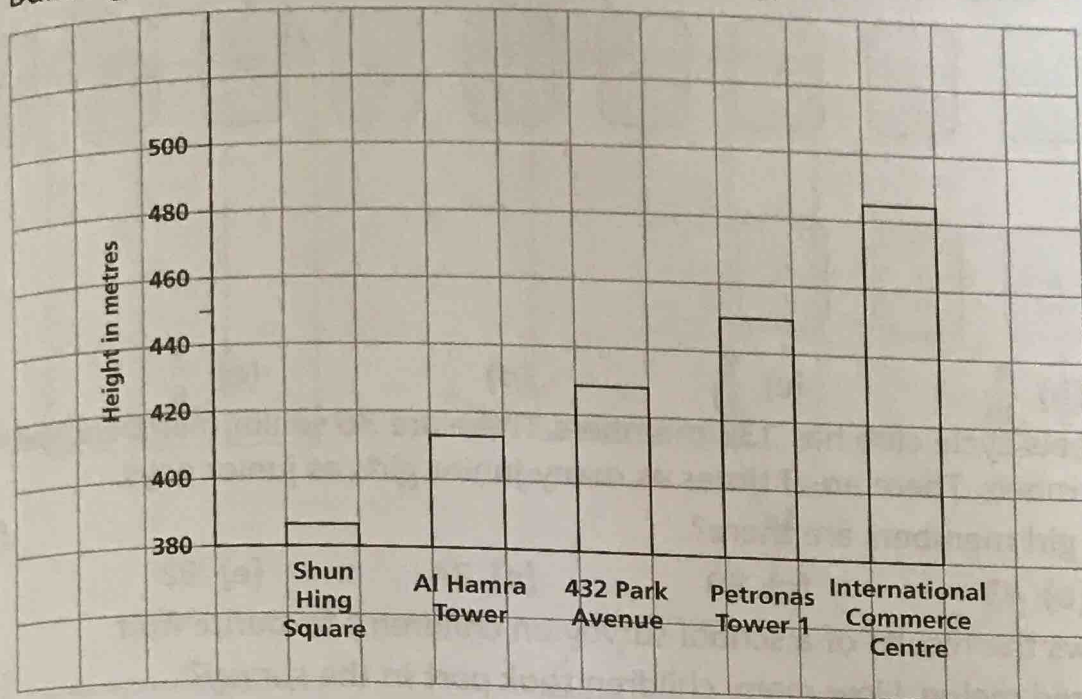
40 Mr Thrower's allotment is 12 metres long. He digs 4 sections, each  $g$  m long. What length of the allotment does he have left to dig?

(1)

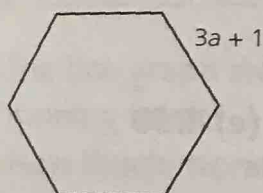
- (a)  $12 - g$
- (b)  $12g$
- (c)  $12 - 4$
- (d)  $g - 12$
- (e)  $12 - 4g$



- 41 The chart shows the height of some of the world's tallest buildings. Which two buildings have a difference of 39 metres in height? (1)

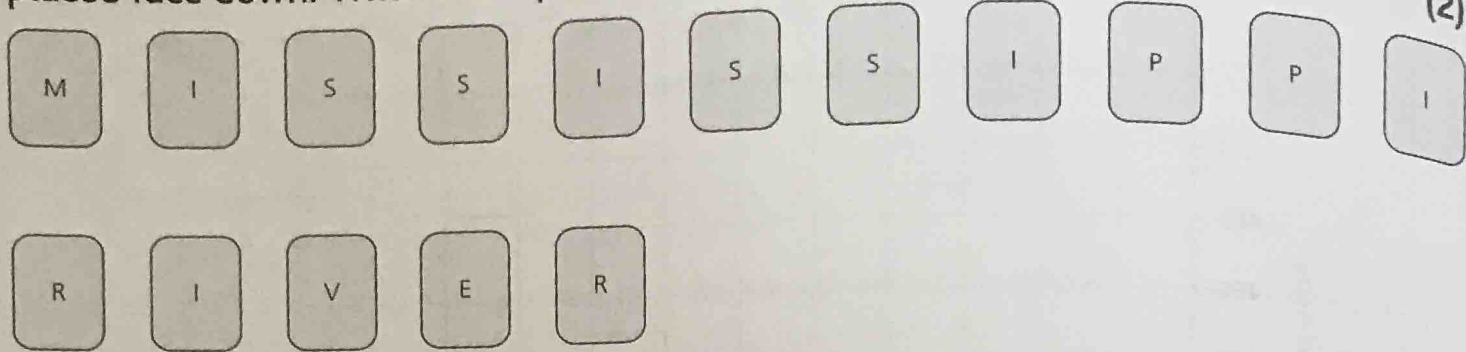


- (a) 432 Park Avenue and Petronas Tower 1  
 (b) International Commerce Centre and Petronas Tower 1  
 (c) Shun Hing Square and 432 Park Avenue  
 (d) Al Hamra Tower and Petronas Tower 1  
 (e) 432 Park Avenue and International Commerce Centre
- 42 The length of one side of the shape shown is  $3a + 1$ . What is the perimeter of the shape? (1)

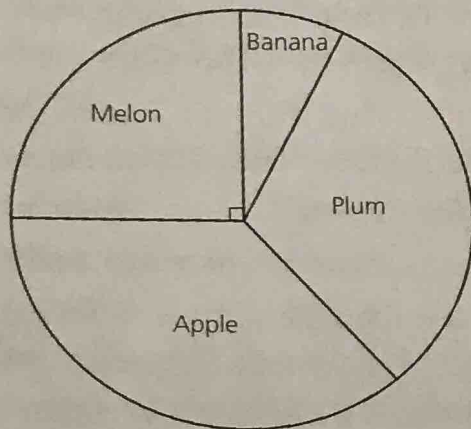


- (a)  $3a + 7$       (b)  $3a + 6$       (c)  $9a + 6$       (d)  $18a + 1$       (e)  $18a + 6$
- 43 The numbers of emails received by a small business each day over a two-week period are listed below.  
 14, 12, 22, 21, 33, 23, 12, 21, 35, 21, 27, 30, 21, 23  
 What is the mode? (1)
- (a) 21      (b) 23      (c) 21.5      (d) 22.5      (e) 35

- 44 The letters to spell 'MISSISSIPPI RIVER' are written on cards. They are shuffled and placed face down. What is the probability of picking a card with an S or a P? (2)



- (a)  $\frac{1}{11}$  (b)  $\frac{1}{16}$  (c)  $\frac{6}{11}$  (d)  $\frac{1}{4}$  (e)  $\frac{3}{8}$
- 45 The Whizzing Wheels cycle club has 132 members. There are 36 senior members. The rest are junior members. There are 3 times as many junior girls as junior boys. How many junior girl members are there? (3)
- (a) 72 (b) 43 (c) 89 (d) 24 (e) 32
- 46 The pie chart shows the results of a school survey on children's favourite fruit. 72 children preferred melon. How many children took part in the survey? (1)

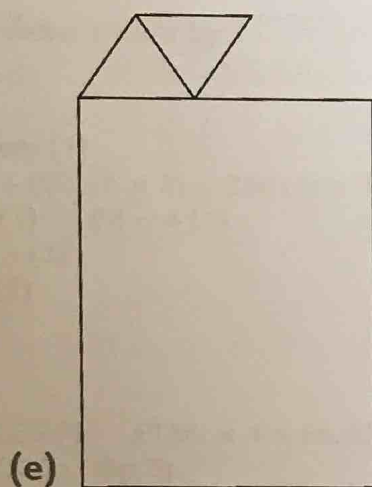
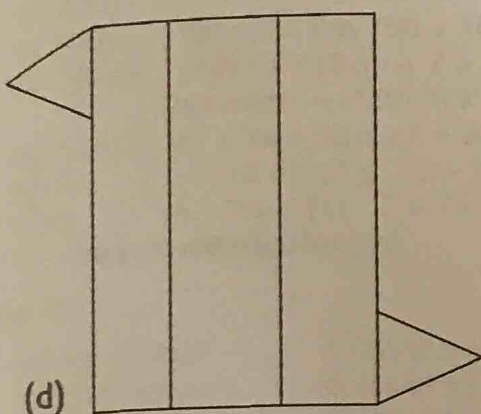
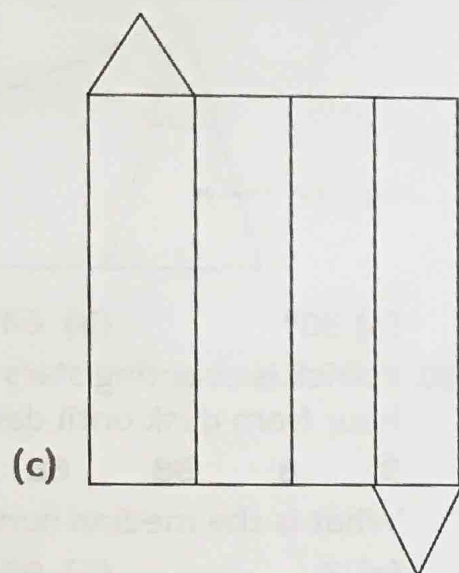
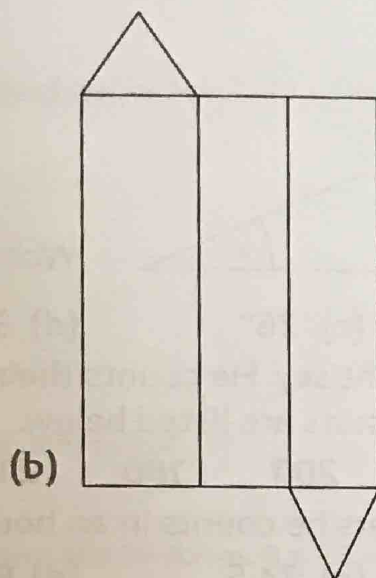
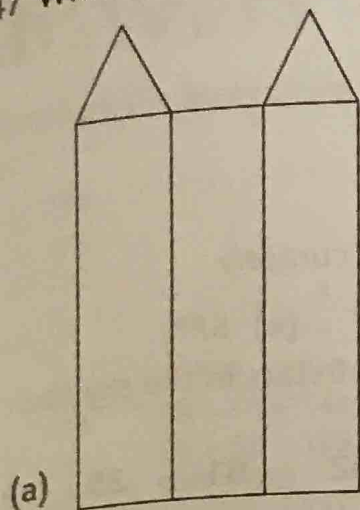


- (a) 144 (b) 100 (c) 288 (d) 360 (e) 250



47 Which of these nets will form a triangular prism?

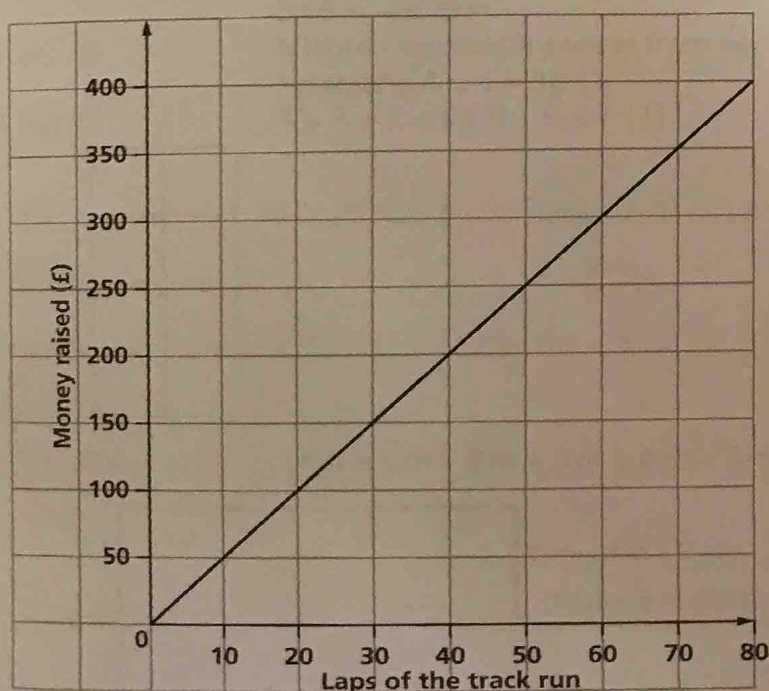
(1)



48 The line graph shows the amount of money Tobias would raise by running laps of a running track.

How much money would Tobias raise if he ran 45 laps?

(1)



(a) £45

(b) £90

(c) £200

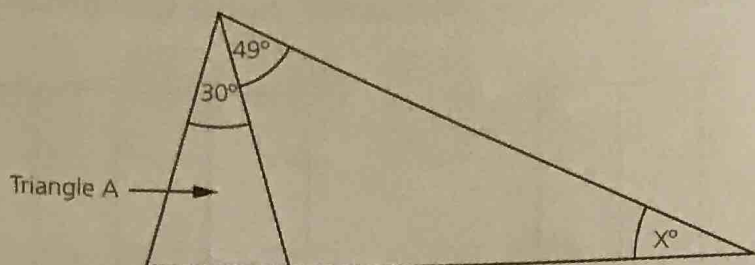
(d) £225

(e) £125

Turn over to the next page

49 Triangle A is an isosceles triangle. What is the size of angle  $x$ ?

(4)



Not drawn accurately

- (a)  $30^\circ$       (b)  $64^\circ$       (c)  $26^\circ$       (d)  $32^\circ$       (e)  $52^\circ$

50 Patrick is counting stars in the night sky. He counts the number of stars in the sky each hour from dusk until dawn. His results are listed below.

3      8      38      68      196      200      180      210      142      81      25      3

What is the median number of stars he counts in an hour?

- (a) 3      (b) 96      (c) 74.5      (d) 81      (e) 190

(2)

Record your results

Score

/ 96

Time