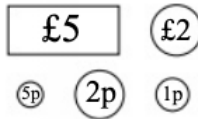


Assessment Test 1

1. James saves the following notes and coins from his pocket money. How much has he saved altogether?

- A** £7.80 **C** £78.00 **E** £70.80
B £7.08 **D** £70.08

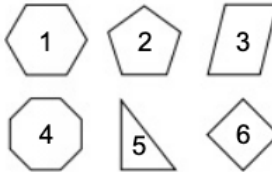


2. A train timetable is shown on the right. If Cara catches the first available train after 9:00 am from Chapel Street, what time will she arrive in Lanston? Answer: _____

Colwyn Gardens	08:50	09:10	09:30
Chapel Street	08:55	09:15	09:35
Bispham	09:06	09:26	09:46
Torsway	09:17	09:37	09:57
Lanston	09:45	10:05	10:25

3. Bethany cuts her birthday cake into eight equal pieces. What fraction of the cake is one piece?

- A** $\frac{1}{7}$ **B** $\frac{1}{8}$ **C** $\frac{1}{6}$ **D** $\frac{6}{7}$ **E** $\frac{7}{8}$



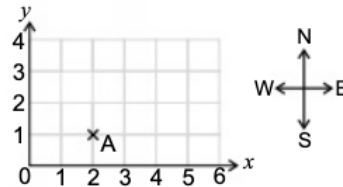
4. Which pair of shapes on the right both have at least one right angle?

- A** 1 and 2 **C** 1 and 6 **E** 2 and 4
B 3 and 5 **D** 5 and 6

5. Which of these times is the same as 16:50?

- A** Ten to five in the morning **D** Ten to six in the afternoon
B Ten to four in the afternoon **E** Ten to six in the morning
C Ten to five in the afternoon

6. Kaye follows a route from point A on the grid. She walks 1 square north then 2 squares east.



What are the coordinates of the point her route takes her to?

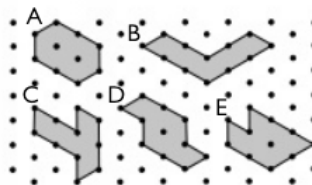
Answer: (____, ____)

7. Robert has two identical trapezium-shaped tiles. One is shown here:



He arranges the tiles on a triangle dotted grid. Which shape on the right cannot be made without overlapping the tiles?

Answer: _____



8. What is the missing number in this equation?

$2808 + 2808 + 2808 = \square \times 6$

Answer: _____

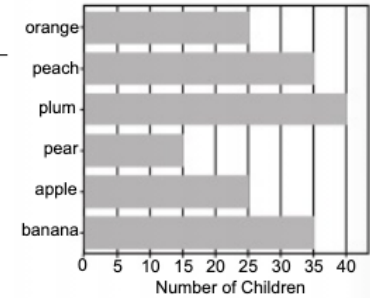
/ 8

9. A bag of fruit costs 99p. How much will 9 bags of fruit cost?

Answer: £ _____

10. 24 children want to go camping. 5 children can sleep in each tent. How many tents do they need?

Answer: _____



11. Each child in Ella's year group was asked to pick their favourite fruit. The results were collected in a bar chart. How many more children chose plums than pears?

- A** 27 **B** 30 **C** 23 **D** 25 **E** 40

12. What is $10 - 8.93$?

Answer: _____

13. Year 5 and Year 6 are split into red, yellow and blue teams.

The number of points won by each team are shown in the table. How many points did the blue team win in total?

Answer: _____

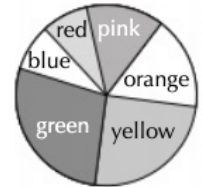
Team	Year 5	Year 6	Total
Red	27	50	77
Yellow	32	25	57
Blue		30	
Total	90	105	

14. What is 45.952 rounded to the nearest tenth?

- A** 45.9 **B** 46.0 **C** 45.95 **D** 45.96 **E** 45.10

15. This pie chart shows the colours of the sun hats worn by 36 children. Estimate the number of children wearing yellow hats.

- A** 5 **B** 9 **C** 12 **D** 15 **E** 2



16. Toby has 4.4 litres of lemonade, 0.9 litres of lime juice and 2.8 litres of orange juice. He mixes them together in a bucket.

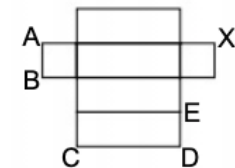
How many litres of liquid is in the bucket?

Answer: _____ l

17. Tara uses this net to make a 3D shape.

Which corner will touch the corner marked X when the net is folded?

- A** **B** **C** **D** **E**



18. The table shows part of the information written on a tin of fruit. Amrit eats $\frac{3}{4}$ of the tin of fruit.

How many grams of carbohydrate did Amrit eat?

Answer: _____ g

	Per $\frac{1}{4}$ tin
Protein	0.4 g
Carbohydrate	12.2 g
Fat	0.1 g
Fibre	1.2 g

/ 10

19. A packet of 6 Milky Bears costs 40p. They are on special offer at 10% off. What is the cost of one milky bear? Answer: _____ p

20. Sandy collects books. 8 out of every 9 of her books are novels. The rest are science textbooks. Sandy has 24 novels. How many books does she have in total? Answer: _____ books

21. Which of the following is equal to 24.
A $48 - 8 \times 3$ **C** 3×7 **E** $2 + 4 \times 4$
B $3 + 11 \times 2$ **D** $24 \div 2 - 1$

22. Which of the following shapes could only go in the region labelled X?

	At least two angles equal	All angles different
At least two sides equal		
All sides different lengths		X

- A** rhombus **D** scalene triangle
B kite **E** isosceles triangle
C regular pentagon

23. Which of the following numbers is not divisible by 4?
A 324 **B** 116 **C** 288 **D** 132 **E** 138

24. Joel weighs a basket containing 7 peaches, as shown on the right. Each peach weighs 200 g.



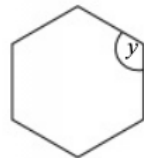
How many kilograms does the basket weigh?
 Answer: _____ kg

25. Here are the shoe sizes of the children at a party.

6 6 4 8 7 5 7 6 5

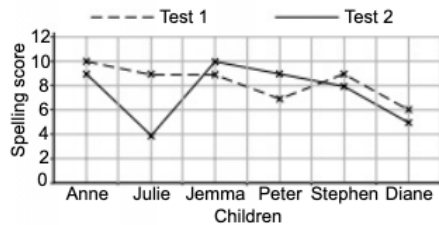
What is the mean shoe size? Answer: _____

26. The shape on the right is a regular hexagon. What size is angle y ?



- A** 180° **B** 60° **C** 120° **D** 90° **E** 175°

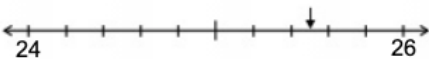
27. The graph shows two sets of spelling scores for a group of children.



What were the scores for the child who had a difference of 2 marks on the tests?

- A** 10 and 8 **C** 8 and 6 **E** 6 and 4
B 9 and 7 **D** 7 and 5

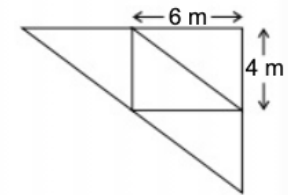
28. What number is the arrow pointing to on the number line?



Answer: _____

29. The playground at Jay's school is made up of four identical right-angled triangles. What is the area of the playground?

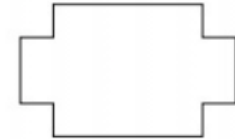
Answer: _____ m^2



30. Adam thinks of a number. He multiplies it by 8, adds 6 and then divides it by 2. He ends up with 131. What was the number he started with? Answer: _____

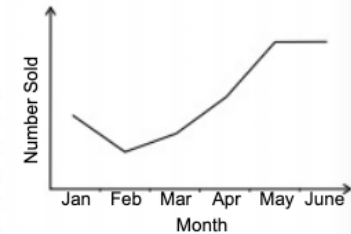
31. Dee is trying to guess what shape Fran is thinking of. Which of these clues would be incorrect for Fran's shape shown below?

- A** My shape has exactly twelve corners.
B My shape has exactly four internal 90° angles.
C My shape has exactly eight internal 90° angles.
D My shape has twelve sides.
E My shape has exactly two lines of symmetry.



32. The graph on the right shows how many of a particular board game have been sold each month over a 6 month period.

	Jan	Feb	Mar	Apr	May	June
Ant Alliance	50	25	10	5	20	45
Bee Bash	45	40	35	30	20	20
Croc Chase	20	10	15	25	40	40
Dodo Detective	30	35	30	35	30	30
Emu Escape	15	20	25	30	40	40



Which of the games below could this be?

Answer: _____

33. Amanda has some pocket money. She spends 60% of it and is left with £6.00.

How much money did she start off with? Answer: £ _____

34. This honeycomb pattern is made up of regular hexagons. The length of each side of the hexagons is 2 cm.

Calculate the distance around the outer edge of this shape.

Answer: _____ cm



35. A tap is dripping water at a rate of 20 ml per minute.

How long will it take, to the nearest minute, for 1 litre of water to be leaked from the tap?

Answer: _____ mins

36. On Tuesday the temperature is 1°C .
By Wednesday it has dropped to -2°C .

The temperature drops by twice as much from Wednesday to Thursday. What is the temperature on Thursday?

Answer: _____ $^{\circ}\text{C}$

37. Eve is baking cupcakes using the ingredients on the right.

Eve needs to make exactly 40 cakes.

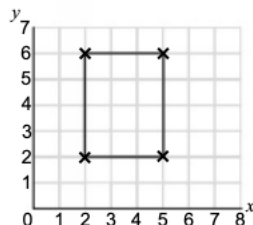
How much butter will she need?

Answer: _____ g

Cupcakes
— makes 12
150 g flour
3 eggs
150 g butter
150 g sugar

38. The rectangle on the coordinate grid is moved 3 units to the right and 2 units down. What are the new coordinates of its corners?

- A** (3, 6), (6, 6), (6, 2), (3, 2)
B (6, 3), (6, 6), (2, 6), (2, 3)
C (5, 6), (8, 6), (8, 2), (5, 2)
D (5, 4), (8, 4), (8, 0), (5, 0)
E (4, 5), (4, 8), (0, 8), (0, 5)

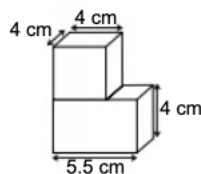


39. Ali raised £540 from a sponsored bike ride. She divides it in the ratio 5:4 and donates each amount to a different charity. What is the difference between the larger donation and the smaller one?

Answer: £ _____

40. The picture on the right shows a cube on top of a cuboid. What is the total volume of the shapes?

Answer: _____ cm^3



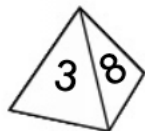
41. What is the n^{th} term of this sequence?

3 8 13 18 23

- A** $6n - 3$ **C** $4n - 2$ **E** $5n - 2$
B $2n + 1$ **D** $5n + 1$

42. A number is written on each face of the triangle-based pyramid shown on the right. The mean of the numbers is 4. What are the two hidden numbers?

- A** 2 and 4 **C** 2 and 5 **E** 1 and 4
B 1 and 2 **D** 1 and 5



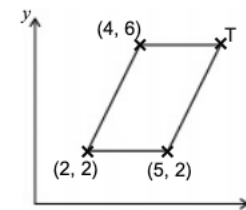
43. Bobby's school have been collecting 2p coins for charity. They count the coins into £1 piles and decide to check they are correct by weighing the piles. Each coin weighs 7.5 g. How many grams should each pile weigh?

Answer: _____ g

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44. The diagram shows a parallelogram. What are the coordinates of point T?

Answer: (____, ____)



45. Kate starts out on a 135 km journey at 8:50 am. She travels on average at 60 km per hour.

What time does she arrive at her destination?

Answer: _____

46. Jane works for a shoe shop and is given a discount card. Jane uses her card to buy a pair of trainers for £24.75. The trainers originally cost £27.50.

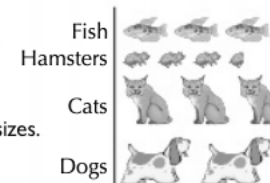
What discount does she receive?

- A** 2% **C** 10% **E** 25%
B 5% **D** 20%

47. The pictogram shows the types of pets owned by children in Year 6. Why is this pictogram misleading?

- A** The pictures only show one breed of each animal.
B You cannot have half a fish or half a hamster as a pet.
C The symbols that represent the different animals are different sizes.
D There are no rabbits shown on the pictogram.
E Children in other year groups may own different pets.

Answer: _____



Each symbol = 2 pets

48. A shop has an offer on greetings cards. You can buy 3 boxes of 20 cards for the price of 2. A box costs £3.90.

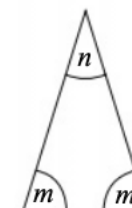
Bella buys 6 boxes in the offer. She also buys a box of 12 cards for £1.80. How much does she spend in total?

Answer: £ _____

49. Use the formula below to find the size of angle m if $n = 46^{\circ}$.

$$m = (180 - n) \div 2.$$

Answer: _____ $^{\circ}$



50. A repair engineer charges a customer £50 for every job and £25 for every hour that he works. Which formula could you use to find how much he charges, C , for h hours of work?

- A** $C = 50 \div 25h$ **C** $C = 50h - 25$ **E** $C = 50 \times h$
B $C = 50 + 25h$ **D** $C = 25 + 50h$

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End of Test

Assessment Test 1

Pages 43-48

1) **B**

$£5 + £2 = £7$, $5p + 2p + 1p = 8p$. $£7 + 8p = £7.08$

2) **10:05**

The first train after 9 am from Chapel Street is at 9:15. It arrives in Lanston at 10:05.

3) **B**

The cake is cut into 8 equal pieces, so each piece is $\frac{1}{8}$.

4) **D**

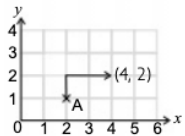
The right angled triangle has 1 right angle, the square has 4 right angles. None of the other shapes have any.

5) **C**

In the 24-hour clock, if the hour is greater than 12 the time is between midday and midnight, which is pm. To convert from the 24-hour clock to the 12-hour clock, subtract 12 from the hour: $16 - 12 = 4$. So 16:50 is the same as to 4:50 pm, which is ten to five in the afternoon.

6) **(4, 2)**

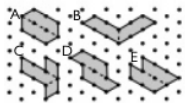
Here is the route she follows:



Don't forget — the x-axis coordinate always goes first when you're writing coordinates.

7) **C**

A, B, D and E can be split into two of the trapezium-shaped tiles shown. C can't because the tiles overlap.



8) **1404**

There are 3 lots of 2808 (multiplication is repeated addition), which is equal to 6 lots of something. 6 is double 3, so halve 2808 to find the missing number. Half of 2808 is 1404. So $2808 + 2808 + 2808 = 1404 \times 6$.

9) **£8.91**

Round each 99p up to £1 by adding 1p, then multiply by 9: $£1 \times 9 = £9$. You added $9 \times 1p$ to the total cost. So subtract the extra 9p. $£9 - 9p = £8.91$

10) **5**

Work through your 5 times table until you come to first number greater than 24. $5 \times 5 = 25$, so 5 tents would be enough.

11) **D**

Read the number of children who chose plums and the number who chose pears off the horizontal axis.

Plums = 40, pears = 15. Subtract to find how many more children chose plums than pears: $40 - 15 = 25$.

12) **1.07**

One way of doing $10 - 8.93$ is to count up from 8.93 to 10 on a quick sketch of a number line.



$0.07 + 1 = 1.07$

13) **61**

You can't calculate the blue team total straight away. One method is to calculate the number of points won by the Year 5 blue team first ($90 - 27 = 32 = 31$). Then use this to find the blue team total ($31 + 30 = 61$).

Team	Year 5	Year 6	Total
Red	27	50	77
Yellow	32	25	57
Blue	31	30	61
Total	90	105	

Alternatively, find the grand total by adding the numbers on the bottom row ($90 + 105 = 195$). Then use this to find the blue team total ($195 - 77 - 57 = 61$).

14) **B**

In 45.952, 9 is in the tenths column. Look at the number in the next column to the right (the hundredths). It is 5, so round the 9 tenths up to 10 tenths. 10 tenths is one unit, so the rounded number is 46.0.

15) **B**

The whole circle represents 36 children. The yellow area of the pie chart is a quarter of the circle. $\frac{1}{4}$ of 36 is $36 \div 4 = 9$. 9 children wore yellow hats.

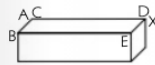
16) **8.1 l**

Add up the three volumes:

$$\begin{array}{r} 4.4 \\ 0.9 \\ + 2.8 \\ \hline 8.1 \end{array}$$

17) **D**

Imagine folding the net up to make a cuboid. Corner D will touch X.



18) **36.6 g**

$\frac{1}{4}$ tin has 12.2 g of carbohydrate. $\frac{3}{4}$ is 3 times as much as $\frac{1}{4}$, so $12.2 \text{ g} \times 3 = 36.6 \text{ g}$ of carbohydrate.

19) **6p**

10% of 40p is $40 \div 10 = 4p$. So the cost of each packet is $40 - 4 = 36p$. There are 6 bears in each packet, so the cost of each bear is $36 \div 6 = 6p$.

20) **27 books**

8 out of every 9 of her books are novels. She has 24 novels, and $24 \div 8 = 3$, so her total number of books must be $9 \times 3 = 27$.

21) **A**

You need to use BODMAS to work out each option.
 A: $8 \times 3 = 24$, $48 - 24 = 24$ — A is the correct answer.
 B: $11 \times 2 = 22$, $3 + 22 = 25$.
 C: $3 \times 7 = 21$.
 D: $24 \div 2 = 12$, $12 - 1 = 11$
 E: $4 \times 4 = 16$, $2 + 16 = 18$

22) **D**

Scalene triangles have three different sides and three different angles. Rhombuses, kites, regular pentagons and isosceles triangles have at least two equal sides and two equal angles.

23) **E**

Multiples of 100 are divisible by 4 ($100 \div 4 = 25$), so ignore the number in the hundreds column and see if the rest of the number is divisible by 4.

A: 324 so $24 \div 4 = 6$

B: 116 so $16 \div 4 = 4$

C: 288 so $88 \div 4 = 22$

D: 132 so $32 \div 4 = 8$

E: 138 so $38 \div 4 = 9 \text{ r } 2$. So E is the answer.

24) **0.9 kg**

First calculate the mass of the 7 peaches: $7 \times 200 \text{ g} = 1400 \text{ g}$. $1 \text{ kg} = 1000 \text{ g}$, so $1400 \text{ g} = 1.4 \text{ kg}$. The mass of the basket: $2.3 - 1.4 = 0.9 \text{ kg}$.

25) **6**

The total of the numbers is 54, and there are 9 numbers altogether. So the mean is $54 \div 9 = 6$.

26) **C**

Angle y is bigger than a right angle (90°), so it can't be 60° (B) or 90° (D). It is smaller than a straight line (180°), so it can't be 180° (A). 175° (E) is almost a straight line and angle y is smaller than a straight line by more than 5° . So that leaves C as the only possible answer.

27) **B**

Look at the points on the graph and see which child has a gap of 2 points between their two scores. Peter is the only child with a difference of 2 points. If you read off the graph, his scores are 9 and 7.

28) **25.5**

There are 10 spaces between 24 and 26. So each space is worth $2 \div 10 = 0.2$. The arrow is pointing half way between 25.4 and 25.6. Half of the gap between 25.4 and 25.6 is $0.2 \div 2 = 0.1$, so the number the arrow is pointing to is $25.4 + 0.1 = 25.5$.

29) **48 m²**

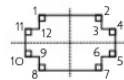
The area of a triangle is $\frac{1}{2} \times \text{base} \times \text{height}$. The playground is made up of four identical triangles. The area of one of them is $\frac{1}{2} \times 6 \times 4 = 12 \text{ m}^2$. So the area of the whole playground is $12 \times 4 = 48 \text{ m}^2$.

30) **32**

To find the answer you need to work backwards from 131. You're told that a number was divided by 2 to make 131 — so the number was $131 \times 2 = 262$. You're told that 6 was added to a number to make 262, so subtract 6 from 262, $262 - 6 = 256$. You're told that a number was multiplied by 8 to make 256, so divide 256 by 8. $256 \div 8 = 32$.

31) **B**

The angles, corners and the lines of symmetry are marked on the shape below (a right angle = 90°).



The shape has eight internal 90° angles, not four. So B is incorrect.

32) **Croc Chase**

On the graph, you can see that the February sales are lowest. The only game for which this is true is Croc Chase.

33) **£15**

If Amanda spent 60% of her pocket money, she must have 40% left. $40\% = £6.00$, so 10% would be $£6 \div 4 = £1.50$. So 100% would be $10 \times £1.50 = £15$.

34) **28 cm**

The length of each side of the hexagon is 2 cm. The outer edge of the shape is made up of 14 hexagon sides. So the total length = $2 \times 14 = 28 \text{ cm}$

35) **50 mins**

Divide 1 litre by 20 ml to see how many minutes it will take. 1 litre = 1000 ml. So you need to work out $1000 \div 20$. You can make this easier to work out by dividing both numbers by 10, so that's $100 \div 2 = 50 \text{ mins}$.

36) **-8 °C**

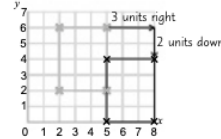
The temperature drops from 1°C to -2°C , which is a drop of 3°C , from Tuesday to Wednesday. Twice this is $3^\circ\text{C} \times 2 = 6^\circ\text{C}$. 6°C lower than -2°C is -8°C .

37) **500 g**

The ingredients given make 12 cakes. $40 \text{ cakes} = 3 \text{ lots of } 12 \text{ cakes} + 4 \text{ cakes}$. 4 cakes = $\frac{1}{3}$ of 12 cakes. You will need to multiply the amount of butter given by $\frac{3}{3}$. You can partition $\frac{3}{3}$ into $3 + \frac{1}{3}$. $\frac{1}{3} \times 150 \text{ g} = 150 \div 3 = 50 \text{ g}$. $150 \text{ g} \times 3 = 450 \text{ g}$. So the total amount of butter is $450 \text{ g} + 50 \text{ g} = 500 \text{ g}$

38) **D**

Look at the top right corner of the rectangle, and follow the instructions to see where it would move to.



The top right corner would now be at point (8, 4).

This coordinate is only in option D, so that's the answer.

39) **£60**

There are $5 + 4 = 9$ 'parts' altogether, so divide $£540$ by 9 to find that 1 part = $£60$. So one charity receives $5 \times £60 = £300$, while the other receives $4 \times £60 = £240$. This means the difference is $£60$.

40) **152 cm³**

Volume of cube = length \times width \times height. You're not given the height for the cube, but it must be 4 cm, because the length, width and height of a cube are all equal.

So the volume = $4 \text{ cm} \times 4 \text{ cm} \times 4 \text{ cm} = 64 \text{ cm}^3$

Volume of cuboid = length \times width \times height.

The width of the cuboid is equal to the width of the cube,

so the volume = $5.5 \text{ cm} \times 4 \text{ cm} \times 4 \text{ cm} = 88 \text{ cm}^3$

Total = $64 \text{ cm}^3 + 88 \text{ cm}^3 = 152 \text{ cm}^3$

41) **E**

The numbers increase by 5 each time. This means that the sequence is related to the 5 times table, and $5n$ will be in the n th term expression. The first term is 3, so when $n = 1$, the expression must give 3. So it must be $5n - 2$, because $5 \times 1 - 2 = 3$.

42) **E**

The mean of a set of four numbers is the total of the numbers divided by 4. So if the mean is 4, the total of the numbers is $4 \times 4 = 16$. The two sides you can see add up to 11 ($3 + 8$). So the two hidden sides must add up to $16 - 11 = 5$. The only pair of numbers in the answer choices that add up to 5 is 1 and 4.

43) **375 g**

First find out how many 2ps make up £1. $£1 = 100p$, so there are $100 \div 2 = 50$ coins in each pile. So each pile should weigh $50 \times 7.5 = 375 \text{ g}$.

44) **(7, 6)**

The shape is a parallelogram, so the top edge is the same length as the bottom edge. The length of the bottom edge can be found by subtracting the x-coordinate of one end from the x-coordinate of the other end: $5 - 2 = 3$ units. So the top edge is also 3 units long. This means that point T's x-coordinate is $4 + 3 = 7$. Point T's y-coordinate is 6, because it has the same y-coordinate as point (4, 6).

45) **11:05 am**

If Kate travels at 60 km/h, she will cover $2 \times 60 = 120 \text{ km}$ in 2 hours. She then goes a further 15 km ($135 - 120$). 15 km is $\frac{1}{4}$ of 60 km, so she will travel 15 km in $\frac{1}{4}$ of an hour. She travels for $2\frac{1}{4}$ hours in total. If she starts at 8:50 am, she will arrive at 11:05 am.

46) **C**

The amount of discount received off the original price of $£27.50$ was $£27.50 - £24.75 = £2.75$. Divide the original amount by the discounted price. $27.50 \div 2.75 = 10$.

47) **C**

The different sizes of the symbols makes this graph misleading, e.g. the line of hamsters is the shortest on the pictogram, but they're the most popular pet.

48) **£17.40**

Bella gets 6 boxes of 20 cards for $4 \times £3.90$. Partition $£3.90$ into $£3 + 90p$. $4 \times £3 = £12$, $4 \times 90p = £3.60$. $£12 + £3.60 = £15.60$. She also gets 12 cards for $£1.80$. Total cost = $£15.60 + £1.80 = £17.40$.

49) **67°**

Put 46° into the formula. $m = (180 - 46) \div 2$. $m = 134 \div 2 = 67^\circ$.

50) **B**

The customer is charged $£50$ for the job, plus the number of hours (h) multiplied by $£25$. So the cost = $50 + 25 \times h$ or $50 + 25h$.