Mixed Problems
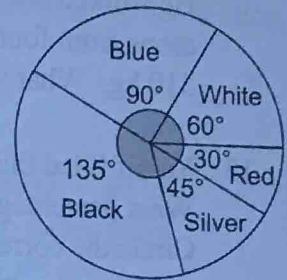
60 people were asked what colour car they drove. The results were recorded in a pie chart.

1. What percentage of people drove black or silver cars?

   [ ][ ][ ]%

2. Express the proportion of people who drove blue or red cars as a fraction in its simplest form.

   [ ][ ][ ]/[ ][ ][ ]

3. Greg has a bag of peanuts. He eats $\frac{1}{20}$ of the bag each day. How many days will it take him to eat 40% of the bag of peanuts?

   [ ][ ]

4. Class 6B wrote down which flavour of pie was their favourite. They showed their results in a pictogram. How many people chose the most popular flavour of pie? Circle the correct answer.

   A 2
   B 4
   C 6
   D 8

Flavour of Pie	Number of People
Pecan	⬮ ⬮ ◖
Rhubarb	⬮ ⬮ ⬮
Pumpkin	⬮ ◖
Blueberry	⬮ ⬮ ⬮ ⬮

   ⬮ = 2 people

5. Jacob buys a bag of seeds for £4.50. Each morning he puts out two cups of seeds on his bird table. The bag runs out after 9 days. How much does one cup of seeds cost?

   [ ][ ][ ]p

6. Miss Orchard is buying some carpet for her hallway, which is 6 m long and 150 cm wide. The carpet she has chosen costs £22 per square metre. How much will it cost to carpet her hallway in total?

   £[ ][ ][ ]

7. Mr Phillips filled a swimming pool with water from a hose. 20 litres of water went into the pool every minute the hose was turned on. Mr Phillips turned the hose on at 8:20 am and turned it off at 10 am. How many litres of water did he put into the pool?
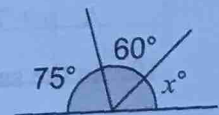
   [ ][ ][ ] litres

8. 1 m by 4 m rolls of turf cost £80.00. Mr Taylor's yard is 5 m long and 8 m wide. How much will it cost him to turf half of his yard?

   £[ ][ ][ ]

9. The picture on the right shows the angle on a straight line split into 3 parts. What fraction of the total does angle x represent? Circle the correct answer.

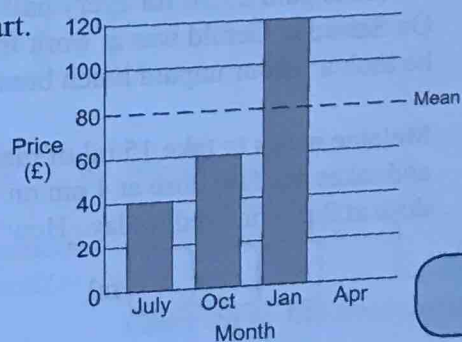   A $\frac{1}{2}$ B $\frac{1}{4}$ C $\frac{1}{5}$ D $\frac{1}{6}$ E $\frac{1}{3}$

10. Mrs Farooq records the sizes of her gas bills on a bar chart. The mean of her four bills is £80. How much is her bill in April?
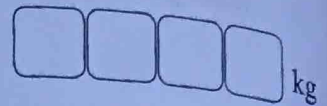
    £[ ][ ][ ]

11. What is the difference between the highest and lowest price of her gas bills from July to April?
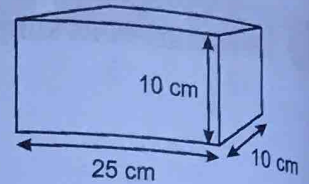
    £[ ][ ][ ]

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Mixed Problems

12. Mr Drew weighed the crops from each of his five apple trees. He worked out that the mean crop weight was 320 kg. The crops from four of his trees were 370 kg, 280 kg, 330 kg and 310 kg. What was the weight of the crop from the fifth tree?
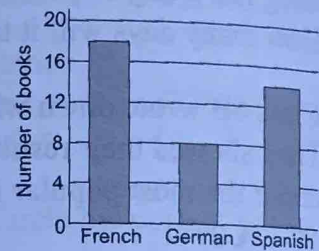
kg

13. Yussif filled this container with 1000 cm³ of water. What percentage of the container was filled with water? Circle the correct answer.

    A 30%   B 15%   C 40%   D 25%   E 20%
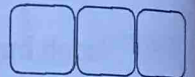
    10 cm
    25 cm   10 cm

14. 40 language textbooks were put into a box. The number of books for each subject was recorded in a bar chart. What fraction of the total number of books were German books? Circle the correct answer.

    A ⅓   B ⅕   C ⅖   D ⅔   E ¼

    Number of books
    20 16 12 8 4 0
    French German Spanish

15. Lars is cleaning his windows. He has a bucket and a 600 ml bottle of washing-up liquid. He needs to add 5 ml of washing-up liquid to every 500 ml of water that he uses. If he uses 6 litres of water each time he fills his bucket, how many buckets could he mix before the bottle of washing-up liquid ran out?
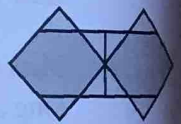
16. Hannah has some tiles in two different shapes — squares and hexagons. She cuts some of the square tiles in half to make triangles and makes the pattern shown on the right. What is the area of her pattern? Circle the correct answer.   Area = S Area = H
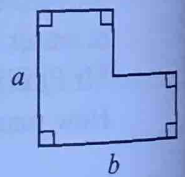
    Hannah's Pattern

    A $2H + 8S$ B $2H + 4S$ C $2H + 2S$ D $H + 4S$ E $H + 2S$

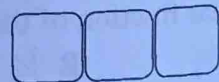17. What is the perimeter of the shape to the right? Circle the correct answer.

    A $2a + 2b$ B $a + b$ C $a \times b$ D $2a \times 2b$ E $2a + b - ab$
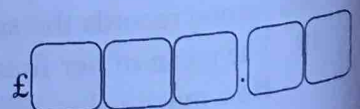
    a
    b

18. Circle the rule below that gives this sequence:
    5, 12, 19, 26, 33...

    A $n + 7$ B $7n - 2$ C $7n + 2$ D $n + 4$ E $n + n^2$

19. In the same sequence, which term gives a value of 173?

20. Gerald is paid £3.50 for every half hour of work he does. On Saturday Gerald was at work from 6:20 am to 4:50 pm and he took a 1 hour unpaid lunch break. How much did he earn?

    £

21. Melanie needs to take 15 ml of medicine every 2 hours. She opens a full medicine bottle and takes her first dose at 4 pm on Monday, and finishes the bottle of medicine with a last dose at 2 pm on Wednesday. How much medicine was in the bottle to start with?

    ml

    / 10