Mixed Problems 5th & 6th

1. How much would 3.260kg of bananas cost if the price is €0.94 per kg?

2. Kieran's dad bought a new car. The price of the car was €16,600 and he paid an extra 12 ½ % for metallic paint. How much extra did the paint cost?

3. Shane scored 14 goals in his first season, 26 goals in his second and 23 goals in his third. What was the average score for the 3 seasons?

4. These are the prices of pick and mix in three different shops: €1.60 per 250g, €3.30 per 500 g and €6.60 per 1 kg. How much would 750 g of sweets cost in each shop? Which shop has the best value?

5. Find the average height of these people 1.54m, 1.62m, 1.42m, 1.8m.

6. An electrician fixes a washing machine and charges €152 for parts and labour. If she adds 12 ½ % VAT to the bill, how much will the total bill be?

7. A set of tools weighs 3kg48g. How much do 6 sets weigh?

8. A shopkeeper bought 18kg of bananas for €6.12. If he sold the bananas at 49c per 500g, how much profit did he make?

9. A bag of apples weighs 5kg9g. Seven such bags are placed on a pallet weighing 2 and 7/8 kg. What is the total weight of the apple and pallets?

10. Pat lives 6.425 km from the shopping centre. Claire lives 4.2 times further away. How far is Claire's house from the shopping centre?

11. How many rolls of wallpaper would be needed to paper 4 walls of total area 48m² if a roll of paper is 8m long and ½ m wide?

12. A tank holds 1,775 litres of water. How many 25 litre capacity containers can be filled from it?

13. A man spent 2/5 of his money on a new coat. If the coat cost €150, how much had he at first?

14. John had a square bedroom which is 5m long. Fiona's room is rectangular and measures 4m by 6m. What is the difference between the areas of the bedrooms?

15. A ship is sailing due South. If the ship turns 135˚ clockwise, in what direction will it be sailing?

16. The price of 10 tennis balls is €4.50. How much for 3 tennis balls?

17. An empty box weighed 579 g. When Stephen put 3kg 21g of potatoes and 81 kg 89g of carrots into the box, what was the total weight?

18. List the odd numbers between 10 and 30? How many even numbers are there between 40 and 80? List the prime numbers between 10 and 30. List the composite numbers between 0 and 20.

19. If a 750g can costs 68c. How much would 4 cans weigh and cost?

20. The perimeter if a car racing circuit is 6.5 km. How far will a car travel if it completes 20 laps of the track?

21. Sharon read 25% of her book. If there were 232 pages in the book, how many pages did she read?

22. If the temperature at noon was + 11 ˚C and 10 hours later it was - 5˚C, what was the drop in temperature?

23. If a wood pile contains 1,612kg of wood and 31 kg is burned each day, how long will the wood last?

24. John's mum was buying a new car for € 18,760. The same model with metallic paint was 12 ½ % dearer. How much was the metallic model?

25. Three children were saving money for a school trip. If the first child saved €6.54, the second child saved €9.36 and the third child saved €7.23, what was the average amount saved?

26. The average of three numbers is 65. Two of the numbers are 53 and 61. Find the third number.

27. One year 43,388 people went to the horse show in Dublin. 11,688 less people went to a soccer game. How many people went to the game?

28. A lift can carry 500 kg. David weighs 64 kg 78g. On a delivery he must carry fruit baskets each weighing 1.5kg to an upstairs shop. What is the greatest number of baskets he can safely take with him into the lift?

29. Having spent 1/3 of his money, Paul had €18 left. How much had he at first?

30. Fifth class performed a nativity play for charity at Christmas. They took in €138 on Thursday. That was 3/5 of their takings. How much did they collect?

31. A car used 3 litres of petrol for every 40 km travelled. How many litres were needed for a journey of 200 km? What was the cost of the petrol at 92c per litre?

32. Maeve looked at 1/8 of Theresa's stickers. If she looked at 24 stickers, how many stickers had Theresa altogether?

33. A machine works continuously from 8.30 a.m. to 5.00 p.m.. It uses 14 units of electricity per hour. How much does it cost to run the machine for 5 days at 5c per unit?

34. Paul's dad owns an electrical goods shop. One week he sold 35 televisions, 25 video recorders, 45 radios, 15 CD players and 20 personal stereos. Show this information on a vertical bar line chart.

35. A car travels 16 km on one litre of petrol. How far should it travel on 3.5 litres of petrol?

36. In a bag of 24 apples 6 are rotten. What percentage of the apples are rotten? What percentage are not rotten?

37. 5/6 of a number is 4,905. What is the number?

38. A farmer has 38 calves. Each calf eats 2kg500g of calf meal every day. What does it cost the farmer to feed calves for the month of March if calf meal costs€1.28 per kg?

39. A pallet of pet food holds 360 cans. Each can weighs 125g. If a lorry can carry 7,200kg, how many pallets will it take?

40. Thomas is 2¾ kg heavier than Derek. If Derek is 34.78kg, what is their combined weight?

41. Anna went to a basketball game at 17.15. She spent 2½ hours at the game. When did she come home/

42. Stella's basketball team won six of the nine games they played. What fraction of their games did they win?

43. A wall is 4.4m long and 3m high. How much would it cost to wallpaper it at a cost of 40c per m^s?

44. Michael's greyhound ran 100m in 14.85 seconds. If the greyhound could keep up this speed, how long would it take him to travel 5km?

45. The average age of five children is 12 years. What is their total age?

46. I there are 86 bags of coal, each weighing 54kg, on a lorry, what is the total weight of the load?

47. Taking the hours between 9.00am and 9.00pm, divide a typical school day into five headings: in school, travel, eating, playing, homework. Round your times to the nearest hour. Show your findings on a pie chart. Write five questions about the pie chart.

48. After every successful lift, a weightlifter increases the weight by 10%. If his first lift was 15.500kg, what was his second lift?

49. If the average speed of a jet is 540kmh, how far will it fly in 2½ hours?

50. Mary was sailing in the direction of SE. If she turned the boat clockwise to sail to the W, through how many degrees did she turn?

51. If a train departs Paris at 09.50 local time and takes 6 hours to arrive in Moscow, what time will it be in Moscow?

52. Tottenham Hotspur scored 12 goals in their last five games. Tom scored 8 of those goals. What fraction of his team's goals did Tom score?

53. Harry set a video tape to come on at 18.50. The tape ran for 4hrs 25mins. When did the tape stop?

54. A box of ticket stubs contained 8 blue stubs, 5 red stubs, 5 green stubs and 2 white stubs.
    a. which colour of stub has the best chance of being pulled out? Why?
    b. Which colour of stub has the least chance of being pulled out? Why?
    c. Which two colours of stub have and equal chance of being pulled out?

55. Construct a triangle with 2 sides measuring 4cm and 5cm with an angle of 72º between them. Measure the third side and the other angles.

56 Dad painted ⅓ of the house on Monday and a further ⅝ of it on Tuesday. What fraction of the house was painted by Tuesday evening?

57. 45% of a school of 320 pupils are girls. How many boys and girls are there in the school? What percentage of the pupils are boys?

58. 37½% of the trees in a forest are oak trees. If there are 769 trees in the forest, how many oak trees are there? What percentage are other varieties of tree?

59. Three pieces of wood measuring 6m 45cm, 158cm and 9.38m respectively are joined together. What is their total length?
    Five boxes measuring 2.06m 1m 24cm, 173cm, 3m 2cm and 0.82m respectively are placed on top of each other. What is their total height?

60. How many 250g rice tins can be filled from a container that holds 6¾ kg of rice?

61. In a week a show shop sold 86% of its newspapers. If the shop had 2,800 newspapers, how many did they sell?

62. Find the average of 3.5cm, 4.5cm, 1.5cm and 2.5cm.

63. A football jersey costs €28.75. How much would it cost to buy jerseys for an entire football team and five subs?

64. Valerie swapped ²/5 of her stickers for a sticker book. If she gave 36 stickers for the book, how many stickers had she at first?

65. The dripping tap in Mark's room loses 20.272 litres of water per week. How much does it lose each day?

66. At a party 25 children drink a can of soda each. If a can contains 330ml, how much soda is consumed altogether? If a can costs 75c how much will the cans cost?

67. Sam read 143 pages more than John. How many pages did they read between them?

68. What are the chances of getting a 3 if you throw a dice?

69. Maths copies were offered at 28c each or 99c for a bundle of 4. How much would you sae by buying a bundle of 4?

70. ⅓ of Harry's savings is €12.87. How much has Harry saved?

71. Concrete for a footpath 8m long costs €64. If the concrete costs €4 per m^s, What is the width of the path?

72. Hayley got a job delivering flyers to houses. If she delivered ²/5 of them on Wednesday and 35% on Thursday, what percentage has she to deliver on Friday if she is to finish her work before the Weekend?

73. A box of sweets containing 384 sweets was opened. The children ate the following shares: Mark 1/16 Danielle ⅜ Susan 1/12 Cathal 1/6. How many sweets did each child take?

74. If a lorry travels from Carlow to Galway (187km) and back 3 times per week how far will it travel in total in two weeks?

75. At a party 23 cans of orange were drunk. If each can hold 330ml or orange, how many litres were drunk? If each can cost 80c, how much per litre did the orange cost? Use your calculator. Give your answer to the nearest cent.

76. From a 1½ bottle of cola, Sinead spilled 375ml and drank 330ml. How much cola was left in the bottle?

77. Charles worked on a project on the planets. He displayed it on a sheet of poster paper 45cm wide. If Earth accounted for ¼ of the display, what area was given to Earth?

78. If the height of each storey of a building is 3.27m, what height is the building if it is 45 storeys high/

79. A stamp measures 3cm by 2cm. What is its area?
An envelope measures 18cm by 10cm. What is its area?
How many stamps would you need to cover the front of the envelope?
What would be the cost of the stamps if each stamp is 35c?

80 When just ⅜ of Joan's birthday cake was left, Joan gave a ¼ portion to her baby sister. What fraction had she left then?

81 If the thickness of a slice of bread is 13mm and there are 25 slices in a sliced pan, how long is the sliced pan? (answer in cm).

82 How many spokes are there in a wheel if the angle between them is 18?

83 The label on a jar of jam shows that 64g of sugar is used in every 100g of jam. If the jam weighs 454g what amount of sugar is used?

84 If the circumference of a wheel is 2.85, how far has the wheel travelled after 547 revolutions? (answer in km, correct to 3 decimal places).

85 A motorist travelled at an average speed of 86km per hour. How far would she have travelled in 2½ hrs?

86 Norma worked in a sweet factory. Her first job was to divide 9.726kg of sugar into 8 equal parts. How much sugar was in each part?

87 14.916kg of compost and soil are mixed in a ratio of 6 parts soil to 5 parts compost. How much soil was used?

88 A wine merchant bought wine at €5 per bottle. If she sold it at €6.50, what was her percentage profit?

89 How much would a fence for a rectangular garden cost if its length is 8m and its width is 5m and fencing costs €20 per m?

90   Mum cut 28% of the lawn on Monday and 46% on Tuesday. What percentage had she left to do on Wednesday?

91   If a CD costs €15 and this does not include VAT at 21% how much VAT will be added to the price?

92   Jennifer lost 4/9 of her marbles to Conor. She had 60 left. How many marbles had she before playing Conor?

93   Ciara needs to pour 24 cups of apple juice for her scout troop. If each cup holds 280ml, how many one-litre bottles of juice does Ciara need to buy? How much juice will be left over?

94   Emma's dad has eight dogs. Six of the dogs are greyhounds. What fraction of the dogs are greyhounds?

95   If a swimming pool is 25m long, 12.5m wild and 1.9m deep, how much water will it hold when full?

96   At a rugby match 13% of the 15,000 tickets were not sold. What percentage was sold? How many tickets were sold?

97   A 2kg packet of sugar costs €1.72. A 1½ kg bag of sugar costs €1.20. Which offers the better value?

98   Share 216 sweets between two people in the ratio of 5:3. What fraction does each receive? How many does each person receive?

99   The average green fee of four golf clubs is €34. Three of the fees are €18, €25 and €42. Find the fourth fee.

100   Neil spent ¼ of his money. If he spent €359, how much had he at first?

101   A video recorder is set to tape a film beginning at 20:45 and ending at 22:55. How long does the film last?

102   These are the prices of potatoes in three different shops:

€0.46 per ½ kg:	€0.28 per ¼ kg:	€0.66 per 750g

A   How much would 1kg cost in each shop?
B   Which shop has the best value?

103   A 300ml can of fruit juice cost 70c. What change do I get out of €5 if I buy 1.2lt. of fruit juice.

104   A teacher bought six books for €17.82. How much did each book cost?

105   A man bought a car for €15.000. Two years later he sold it for €12.000. What was his percentage loss?

106   A cinema has 48 seats in each row. If there are 35 rows, how many seats are in the cinema?

107   The average weight of three people is 72kg. The first person weighs 80kg and the second 74kg, what is the weight of the third person?

108   A clothes shop buys jeans for €30 per pair. If a percentage profit of 30% is added what profit is made on a pair? For what price is the jeans sold?

109   522 flowers were planted in three flowerbeds in a ration 3: 2: 1: How many flowers were planted in each bed?

110   75kg of potatoes cost €6.44. How much does 1kg cost?

111   A car is travelling at a speed of 76.4. A train is travelling 1.3 times faster than the car. What speed is the train travelling at?

112   Pauline had 136 football cards.   She gave 37½% to Chris. How many did she give to Chris?

113   The gardener bought 2.5lts of garden fee. How much did she pay if it was priced at €1.48 per litre?

114   In a lift, what number is usually given to the ground floor, the first floor, the second floor, the basement and the sub-basement?

115   Peter needs 630cm^s of paper to cover his book. If the length of the paper is 18cm, what is the width of the paper?

116   John had 10 marbles. He lost 6 of them. What fraction did he lose?

117   A football team scored the following numbers of goals in their last 5 matches: 3,2,2,4 and 4. What is their average score?

118   Brendan spent ½ is money on football boots and 32% on a football jersey. Which was dearer and what was the percentage difference?

119   If a carpet costs €9 per m^s, how much does it cost to carpet Alison's bedroom, which is 4m long and 3m wide?

120   Breda drew hopscotch rectangles with sides 45cm long by 36cm wide. If she had seven rectangles, what was the total area of the game?

121   A television programme begins at 18:25 and lasts for 1hr 55mins. At what time does it finish?

122   A supermarket buys bread for 50c per loaf. If a percentage profit of 20% is added, for how much is the bread sold?

123   Karen has €40 in her bank account. If she writes a cheque for €50, what is her account balance?

124   A wheel was rotated through nine revolutions. Through how many degrees did it turn?

125   Ciara earned €24.48. She earned ⅝ of it by making cakes for the local shop, 1/6 if it by cutting grass for the neighbours and the remainder by washing her mother's car. How much did she earn at each activity?

126   In a long-distance race, John knew that he had covered 20% of the race when he had reached the 2.225km mark. How long was the whole race?

127   A chef sets an oven to roast a joint of meat. If he sets the oven to come on at 12.35 and the joint needs 2hrs 40mins to cook, at what time will he set the oven to finish?

128   A wall is made up of 58 rows of bricks with 268 bricks in each row. How many bricks are in the wall?

129   The capacity of a petrol tank in a car is 60 litres. How much would it cost to fill the tank if petrol costs 81.2c per litre?

130   A garage sold 2 cars for €15.000 each, 3 cars for €18,500 each and 5 cars for €24,000 each. What was the average price per car?

131   A tennis racket marked €29.60 was increased in price by 25%. Find the new price of the racket.

132   Three 3-litre bottles of minerals were consumed. (i) How many litres in total were drunk? (ii) If each glass poured was ⅓ of a litre how many glasses were filled? (iii) Approximately how many ml were in each glass?

133   Sarah walk 19.685km to and from school every week. How far does she walk each day?