Multiplication and Division – Sheet 3

1. I buy six books that cost £7.99 each and four CDs that cost £12.99 each. Use approximation to work out the total cost to the nearest pound.
2. A lawn is 19.5 m long and 4.5 m wide. Is its area greater or less than 100 square metres? Explain how you know.
3. A car park has 76 rows for parking. There are 52 car spaces in each row. Which of these is the best way to estimate how many cars can park altogether? 80 × 60 = 4800, 80 × 50 = 4000, 70 × 60 = 4200. Explain your choice.
4. Which of these two numbers multiplied together give the product closest to 24? 7.9, 9.2, 2.1, 2.8.
5. Solve missing number problems
6. 4.8 ÷ = 0.96
   1. 1⁄8of = 40
7. The perimeter of a regular octagon is 348cm. How long is each side?
8. A boy worked out how many 19p stamps you can buy for £5. His answer was 25. Do you think he was right or wrong? Why?
9. Will the answer to 75 ÷ 0.9 be smaller or larger than 75? How do you know?
10. 317 people are going on a school coach trip. Each coach will hold 28 passengers. How many coaches are needed?
11. A full box holds 180 pins. How many boxes can be filled from   
    100 000 pins?
12. A rope is 12 metres long. How many lengths of 85 cm can I cut from it?
13. A bus holds 52 people. How many buses are needed for 327 people?
14. Apples weigh about 190g each. How many apples would you expect to get in a 2 kg bag?
15. Roughly how many pot plants can I buy with £50 if each plant costs £2.99?
16. I bought some pencils that cost 15p each. I paid £5.85. How many pencils did I buy?
17. Three bars of chocolate cost £1.24. How much would six bars cost?
18. There is space in the car park for 9 rows of 48 cars. How many cars can park?
19. Show me your method for solving this problem:   
    ‘What is the total weight of 8 apples each weighing 50.4 grams?’   
    What approximations did you make? Explain how you worked out the answer.
20. I buy six books that cost £7.79 each and four CDs that cost £12.49 each. Use approximation to work out the total cost to the nearest pound.
21. A lawn is 19.52 m long and 6 m wide. Is its area greater or less than 100 square metres? Explain how you know. What is its area?
22. If you multiply me by 3, you will get 24. What number am I?
23. Multiples of 6 end in 0, 2, 4, 6 or 8. Is this statement true or false?
24. Multiples of 7 are all even. Is this statement true or false?
25. Name all the multiples of 7 between 20 and 30.
26. Name three numbers that are multiples of 6 and multiples of 5.
27. What is the lowest common multiple of 4 and 6?
28. Write down the first five numbers that are multiples of 6 and multiples of 8. Describe what you notice about the sequence and predict the next two common multiples.
29. I need to pay 51p postage using only 12p and 5p stamps. How many of each should I put onto my parcel?
30. Where in this Carroll diagram should the number 8 go? Write an appropriate number into the bottom left cell.  
    
31. Find a number between 230 and 240 that is a multiple of 9.
32. Jake and Darren did a sponsored run. Jake earned £5 for every complete mile he ran. Darren earned £6 for every complete mile. They each raised the same amount of money, which was over £40 but under £80. How much money did each boy raise? How many miles did each boy run?
33. Consider the numbers 20 and 12. What is their lowest common multiple? What is their highest common factor?

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| 1. Use factors, when appropriate, to calculate mentally, e.g.: 2. 35 × 12 = 35 × 2 × 6 3. Talk me through an easy way to do this multiplication/division mentally. Why is knowledge of factors important for this? 4. How do you go about identifying the factors of a number greater than 100? 5. What is the same/different about these sequences: 6. 4.3, 4.6, 4.9, 5.2, … 7. 16.8, 17.1, 17.4, 17.7, … 8. 9.4, 9.1, 8.8, 8.5, … 9. I’ve got a number sequence in my head. How many questions would you need to ask me to be sure you know my number sequence? What are the questions? |

1. Find a number between 230 and 240 that has a factor of 9.
2. List all the factors of 36. How many does it have? Most numbers have an even number of factors. Why is 36 a special case?
3. I am thinking of a number that is a factor of 24 and a factor of 40. What is the largest possible number I could be thinking of?
4. Pupils to investigate patterns and spatial representations of known sequences of numbers, e.g. multiples, square numbers and triangular numbers.
5. Jon says, ‘a square number cannot be an odd number.’ Is Jon correct? How do you know?
6. What number squared gives me the answer of 81?
7. How could I calculate the square number for a large 3 digit number such as 123?
8. Give two prime numbers that add together to make ...?
9. Name a prime number greater than 100. How did you do it?
10. Ashad says 172 is a prime number. Is he right? How do you know?
11. How do you work out whether a large 3 digit number is a prime number?