Number- Multiplication and Division – Sheet 2

1. Establish whether pupils are able to connect division facts with finding fractions of numbers and quantities e.g.
2. 1/3 of 24 is equivalent to 24 ÷ 3.
3. 4/5 of 35 is equivalent to finding 35 ÷ 5 and multiplying the answer by 4.
4. Establish whether pupils are able to use factors to help them work out division calculations.
5. e.g.90 ÷ 6 by dividing 90 by 3 and dividing the resulting quotient by 2.
6. The perimeter of an equilateral triangle is 120 cm. How long is each side?
7. Which numbers less than 100 have exactly three factors?
8. What number up to 100 has the most factors?
9. The sum of four even numbers is a multiple of 4. When is this statement true? When is it false?
10. Can a prime number be a multiple of 4? Why?
11. Can you give me a number greater than 100 that is divisible by both 3 and 5. How did you do it?
12. What is 0.9 × 4? How did you work this out?
13. Multiply 7 by 0.6.
14. Divide 4.8 by 6.
15. What is 4 × 0.7? How do you know?
16. 0.15 ÷ 3 =
17. What number multiplied by 8 equals 4.8?
18. What multiplication and division facts do you know, or can you derive, with an answer of 5.6?
19. What could the missing numbers be? × = 3.2
Can you think of several pairs of numbers that would work?
20. Solve 2.8 ÷ = 0.4.
21. My pencil is 9.2 cm long. My desk is 6 pencil-lengths wide. How wide is the desk, in centimetres?
22. Six packets of crisps cost £1.20. How much does each packet cost in £s?
23. How many different multiplication and division facts can you find, using what you know about 72? What if you started with 7.2? 0.72?
24. The answer to a multiplication or division calculation is 0.56. What could the calculation be? How many possibilities can you find?
25. Are any of the following incorrect?
0.7 × 0.8 = 5.6
8 × 0.8 = 6.4
56 ÷ 0.7 = 8
Explain why and how you know, using words or diagrams.
26. Establish whether pupils are able to connect division facts with finding fractions of numbers and quantities e.g.
27. 1/3 of 240 is equivalent to 240 ÷ 3.
28. 4/5 of 350 is equivalent to finding 350 ÷ 5 and multiplying the answer by 4.
29. How many £10 notes are in £120, £1200? How many £1 coins, 10p coins, 1p coins?
30. Tins of dog food at 42p each are put in packs of 10. Six packs are put in a box. How much does one box of dog food cost? 6 boxes? 12 boxes? Etc.
31. My pencil is 9.2 cm long. My desk is 6 pencil lengths wide. How wide is the desk in centimetres?
32. Find a number whose double lies between 1.3 and 1.4.
33. The answer to a multiplication calculation is 0.56. What could the calculation be?
34. A girl worked out the cost of eight bags of apples at 47p a bag. Her answer was £4.06. Without working out the answer, say whether you think it is right or wrong.
35. Explain how you would do this multiplication by using factors, e.g. 5.8 × 40
36. What clues do you look for when deciding if you can do a multiplication mentally? E.g. 5.8 × 40.
37. Give an example of how you could use partitioning to multiply a decimal by a two-digit whole number, e.g. 5.3 × 23.
38. Discuss the relationship between division and fractions: relate finding 1⁄3 of 24 to 24 ÷ 3
39. Find fractions of numbers and quantities, e.g. ‘What is 4⁄5 of 35?’
40. I divide a four-digit number by 100. The answer is between 70 and 75. What could the four-digit number be?
41. Tom says: ‘If I divide a four-digit number by 1000 it always has a number after the decimal point.’ Is he right? Explain your answer.
42. The perimeter of an equilateral triangle is 12 cm. How long is each side?’
43. How do you know if a number is divisible by 6?
44. Is there a quick way to check if a number is divisible by 25?
45. The quotient is 5. Make up some questions. How did you go about devising these questions?
46. 73.6 ÷ 3.2 = 23. Explain how you can use this to devise calculations with the same answer.
47. Solve missing number problems such as 4.8 x = 43.2
48. 611 is the product of two prime numbers. One of the numbers is 13. What is the other one?
49. Three bars of chocolate cost 90p. How much would six bars cost? And 12 bars?
50. There is space in the car park for 17 rows of 32 cars. How many cars can park?
51. How many hours are there in one year?
52. Show me your method for solving this problem:
‘What is the total mass of 235 screws each weighing 6 grams?’
What approximations did you make? Explain how you worked out the answer.
53. Here is a multiplication calculation with some missing numbers.



What is the calculation?

Explain how you worked it out.