Year 6 Arithmetic Quiz 3

Square and cube numbers.

1

$3^2 =$

2

$5^2 =$

3

$7^2 =$

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4 $2^3 =$

5 $3^3 =$

6 $5^3 =$

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Multiply by 0 and 1, divide by 1.

7 78 × 1 =

8 1045 × 1 =

9 62 × 0 =

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10 723 × 0 =

11 61 ÷ 1 =

12 261 ÷ 1 =

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Multiplying three numbers.

13 $9 \times 4 \times 8 =$

14 $6 \times 8 \times 4 =$

15 $3 \times 5 \times 6 =$

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16 $2 \times 5 \times 7 =$

17 $8 \times 7 \times 4 =$

18 $7 \times 8 \times 3 =$

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Multiplying using formal written methods.

19 48 × 5 =

20 57 × 4 =

21 37 × 8 =

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22 472 × 68 =

23 593 × 34 =

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24 772 × 87 =

25 2288 × 14 =

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26 3725 × 21 =

27 2749 × 26 =

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Dividing using formal written methods.

28 272 ÷ 4 =

29 696 ÷ 8 =

30 972 ÷ 9 =

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31 322 ÷ 23 =

32 403 ÷ 31 =

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33 297 ÷ 27 =

34 1869 ÷ 89 =

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35 2232 ÷ 93 =

36 5256 ÷ 73 =

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Year 6 Arithmetic Quiz 3: Answers

1. 9

2. 25

3. 49

4. 8

5. 27

6. 125

7. 78

8. 1045

9. 0

10. 0

11. 61

12. 261

13. 288

14. 192

15. 90

16. 70

17. 224

18. 168

19. 240

20. 228

21. 296

22. 32096

23. 20162

24. 67164

25. 32032

26. 78225

27. 71474

28. 68

29. 87

30. 108

31. 14

32. 13

33. 11

34. 21

35. 24

36. 72

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Year 6 Arithmetic Quiz 3

Multiply by 0 and 1, dividing by 1

Multiply any number by 0, and the answer is 0.

51 × 0 = 0

Multiply any number by 1, and the answer is the number.

51 × 1 = 51

Divide any number by 1, and the answer is the number.

51 ÷ 1 = 51

Multiplying 3 numbers

The numbers can be multiplied in any order. Multiply 2 numbers, then multiply the answer by the other number. This can be useful in making the subsequent calculation easier.

Multiply first

7 × 2 × 4 = 28 × 2 = 56

Multiplication using formal methods

Multiplication by 1 digit

1. Multiply 9 × 6 = 54. Write the 4 in the ones place and the 5 (tens) under the tens place. (It can sometimes be helpful to label the columns to label the columns 1, T, H)
2. Multiply 4 × 6 = 24 (4 tens x 6 tens = 24 tens = 240). Add the carried 5 tens. 24 + 5 = 29 (24 tens + 5 tens = 29 tens). Write the 9 in the tens and 2 in the hundreds place.

		4	9	
	×		6	
	2	9	4	
		5		

Multiplication by 2 digits

1. Calculate 4716 × 4 and write the answer in the first line under the calculation. (It can sometimes be helpful to label the columns 1, T, H, Th, TTh.)
2. Multiply 6 × 4 = 24. Write 4 in the ones place and the 2 above the tens place.
3. Multiply 1 × 4 = 4 (1 ten x 4 ones = 4 tens). Add the 2 (tens), 4 + 2 = 6 (4 tens + 2 tens = 6 tens) and write 6 in the tens place.
4. Multiply 7 × 4 = 28 (7 hundreds x 4 ones = 28 hundreds). Write the 8 in the hundreds place and the 2 above the thousands.

		~~1~~	~~2~~	~~1~~	~~2~~		
			4	7	1	6	
					2	4	
		1	8	8	6	4	
		9	4	3	2	0	
	1	1	3	1	8	4	
		1	1				

5. Multiply 4 × 4 = 16 (4 thousands x 4 ones = 16 thousands). Add the carried 2 (thousands), 16 + 2 = 18 (16 thousand + 2 thousand = 18 thousand). Write 18 in the ten thousands and thousands places.
6. Repeat the process with 4716 × 20 by writing the 0 in the ones place of the second line and multiplying 4716 × 2 = 9432. (Effectively multiplying by two then multiplying by 10.)
7. Add 18864 + 94320 = 113184

Division using formal methods

Short division

1. 2 ÷ 4 = 0 r 2. Write the 2 next to the 1 (hundred). (It can sometimes be helpful to label the columns 1, T, H, Th.)
2. 21 ÷ 4 = 5 r 1. Write the 5 in the hundreds place of the answer and the remaining 1 next to the 9.
3. 19 ÷ 4 = 4 r 3. Write the 4 in the tens place of the answer and the remaining 3 next to the 6.
4. 36 ÷ 4 = 9. Write the 9 in the ones place of the answer.

			5	4	9	
	4	2	^{2}1	^{1}9	^{3}6	

Long division

1. 85 ÷ 23 = 3. Write the 3 in the hundreds place of the answer. Write 69 (23 × 3) under the 85.
2. Subtract 85 – 69 = 16. Bring the 5 from the question down to make 165.
3. 165 ÷ 23 = 7. Write the 7 in the tens place of the answer. Write 161 (23 × 7) under the 165.
4. Subtract 165 – 161 = 4. Bring the 6 down from the question to make 46.
5. 46 ÷ 23 = 2. Write the 2 in the ones place of the answer.
   (It can sometimes be helpful to make rough notes of the key multiples of the divisor from which further multiples can be derived. For example, 23 x 2 = 46; 23 x 5 = 115.)

				3	7	2	
	2	3	8	5	5	6	
			6	9			
			1	6	5		
			1	6	1		
					4	6	
					4	6	
					0	0	