the verbal math lesson 3

LEVEL 3
FOR CHILDREN AGES 8 TO 11

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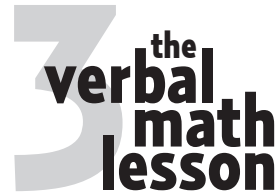
INTRODUCTION



In math – more than in any other subject – a student progresses to the next level of math only after mastering all the previous levels. This step-by-step mastery is achieved through developing automaticity, which is the ability to solve problems with minimal effort. Automaticity is achieved through repeated exposure.

Typical elementary school curriculum uses written math as a path toward automaticity. While easy for some, the additional task of looking at the problem, copying it, and then writing down the solution hinders the acquisition of new skills and development of intuition. Excessive writing makes it cumbersome, eventually leading to an aversion towards math. Worksheets-type problems isolate math from real life. Many children have problems with word problems later in school, because they have not connected math to everyday life. Word problems in this program help to develop this connection.

The Verbal Math Lesson series recognizes and eliminates these barriers that block math proficiency. The program allows the child to direct her focus strictly on math and its algorithms. Many basic math facts need to be simply memorized and this program reinforces them in various ways.

Verbal Math is a useful skill for everyday life. It can be used in daily transactions, from figuring out the amount of change from $20 for lunch to estimating the number of miles a car can go on 5 gallons of fuel. We rely on our mental skills, not on the availability of paper, pencils, or a calculator.

The third book of the Verbal Math series follows the same step-by-step progression proved so successful in earlier volumes. You may consider revisiting previous books in the series if the child has difficulties with the problems here.

In the third book of the Verbal Math series, we reinforce addition and subtraction of double and triple-digit numbers, single and double-

digit multiplication and division. We will present rates and ratios, teach factors, and introduce fractions. As always, we expect all new learning to be natural and fun.

Verbal Math is not a collection of simple problems designed to give the student practice in arithmetic, nor is it an Exercise book to accompany a written math course. Instead, verbal math has a separate set of rules that lead to mastery in a very essential skill - mental computations. Doing problems in your head leads to developing shortcuts and an intuitive understanding which is often overlooked in written math. Additionally, Verbal Math is an indispensable skill when the child moves to fractions, percentages, and, eventually, to algebra.

These lessons are built on learned and reinforced concepts. Each lesson follows a familiar plan: the explanation of a new concept, Exercise sections, and word problems. In the beginning of Word Problems sections we offer solutions with explanations of the procedures and results. If the child answers these problems correctly the first time, there is no need to go over the hints or solutions. In the Word Problems sections, ask the student to give the answer with the relevant units, not just the numbers.

Some word problems might be confusing. Before starting the calculations, the child needs to "blueprint" the problem in her mind to decide what we are measuring, what type of calculation applies, and what units will be used in the answer.

Chapter 10 (measuring and calculating time) might be a challenge for some children. The child must be able to tell time and understand the concept of 24 hours in a day, 60 minutes in an hour, and 60 seconds in a minute. If you encounter difficulties, skip this chapter for now and move on. This is a stand-alone lesson and there will be no interruption in continuity.

As always, please send us your comments and observations.
Thanks you, Best of luck,
Michael Levin and Charan Langton

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BOOK THREE

1

PROPERTIES OF NUMBERS

Numbers you multiply together are called *factors* of the *product*. For example, in 3 × 2 = 6, number 3 and 2 are factors of 6. Also, in 1 × 6 = 6, we call 1 and 6 factors of 6.

We can say 1, 2, 3, 6 are all possible factors of number 6.

- Number 8 has factors 1, 2, 4, and 8 because both 1 × 8 and also 2 × 4 make 8.
- Number 9 has factors 1, 3, and 9.
- Number 10 has 1, 2, 5, and 10
- Number 21 has 1, 3, 7, and 21.

Factors are also numbers that divide the number without a remainder.

When a number has factors other than 1 and itself, we call it a *composite number*. If a number can be divided only by 1 and itself, we call this number *prime*.

- 1 is a prime number, divided by 1 and itself.
- 2 is a prime number, divided only by 1 and itself.
- 3 is a prime number, divided only by 1 and itself.

- 4 is a composite number, because in addition to 1 and itself, it can be divided by 2.
- 5 is prime number (factors 1 and 5)
- 6 is a composite number with factors 2 and 3, in addition to 1 and 6.
- 7 is a prime number (factors 1 and 7)
- 8 is a composite number (factors 1, 2, 4, and 8)
- 9 is a composite number (factors 1, 3, and 9)
- 10 is a composite number (factors 1, 2, 5, and 10)
- 11 is a prime number
- 12 is a composite number (factors 1, 2, 3, 4, 6, and 12)

EXERCISE I

1. Is 14 prime or composite?
   Ans: composite (factors 1, 2, 7, and 14)
2. Is 17 prime or composite? ***Ans:*** Prime
3. Is 19 prime or composite? ***Ans:*** Prime
4. Is 21 prime or composite?
   Ans: Composite (factors (1, 3, 7, and 21)
5. Is 23 prime or composite? ***Ans:*** Prime
6. Is 24 prime or composite?
   Ans: Composite (factors 1, 2, 3, 4, 6, 8, 12, and 24)
7. Is 25 prime or composite? ***Ans:*** Composite (factors 1, 5, and 25)

EXERCISE II

1. What are the factors of number 12? ***Ans:*** 1, 2, 3, 4, 6, 12.
   One and 12 are kind of obvious so we can skip them.
2. What are factors of number 8? ***Ans:*** 2 and 4.
3. What are factors of number 15? ***Ans:*** 3 and 5.
4. What are factors of number 14? ***Ans:*** 2 and 7.
5. What are factors of number 18? ***Ans:*** 2, 3, 6, 9.

6. What are factors of number 21? ***Ans:*** 3, 7.
7. What are factors of number 25? ***Ans:*** Just 5.
8. What are factors of number 23? ***Ans:*** None other than 23. It is a prime number.
9. What are factors of number 17? ***Ans:*** None other than 17. It is a prime number.
10. What are factors of number 27? ***Ans:*** 3, 9.
11. What are factors of number 33? ***Ans:*** 3, 11.
12. What numbers multiplied together give 24? Give all combinations. ***Ans:*** 4 × 6, also, 2 × 2 × 6, also 2 × 2 × 2 × 3.
13. What numbers multiplied together give 36? Give all combinations. ***Ans:*** 2 × 18, also, 2 × 3 × 6, also 2 × 2 × 3 × 3.
14. What numbers multiplied together give 34? Give all combinations. ***Ans:*** 2 × 17, that's all.
15. What numbers multiplied together give 40? Give all combinations. ***Ans:*** 2 × 20, also, 2 × 2 × 10, also 2 × 2 × 2 × 5.
16. What numbers multiplied together give 50? Give all combinations. ***Ans:*** 2 × 25, also, 2 × 5 × 5, 2 × 10 × 5.
17. What numbers multiplied together give 60? Give all combinations. ***Ans:*** 2 × 30, also, 2 × 2 × 15, 2 × 2 × 5 × 3.
18. What numbers multiplied together give 75? Give all combinations. ***Ans:*** 5 × 15, also, 3 × 25, 3 × 5 × 5.
19. What numbers multiplied together give 90? Give all combinations. ***Ans:*** 3 × 30, also, 3 × 2 × 15, 3 × 2 × 5 × 3, 2 × 45, 2 × 15 × 3, 10 × 9, 10 × 3 × 3.
20. What numbers multiplied together give 100? Give all combinations. ***Ans:*** 2 × 50, also, 2 × 25, also, 2 × 5 × 5, 2 × 10 × 5, 25 × 4, 5 × 5 × 2 × 2, etc.

WORD PROBLEMS

1. How can we divide six kittens among 1, 2, 3, and 6 friends?
   Ans: 6 kittens, 3 kittens, 2 kittens, or 1 kitten each.
   Solution: One friend can keep all six kittens, that is 6 ÷ 1 = 6 (kittens).Two friends can divide kittens between themselves: 6 ÷ 2 = 3 (kittens).
   Three friends cad divide them three ways: 6 ÷ 3 = 2 (kittens).
   Six friends can do it too: 6 ÷ 6 = 1 (kitten for each friend)

2. A customer paid $16 for 2 mangosteens. What's the price of one mangosteen? ***Ans:*** $8.
   Mangosteen is a tropical fruit that grows in Indonesia. A legend says that English Queen, Victoria offered 100 pounds sterling (a lot of money in those days) to anyone who brings her a fresh mangosteen fruit. Some people still call the mangosteen the "Queen of Fruit".

3. A customer paid $16 for 4 melons. What's the price of one melon? ***Ans:*** $4.

4. A customer paid $16 for 8 grapefruits. What's the price of one grapefruit? ***Ans:*** $2.

5. If you divide 42 chores evenly among 7 kids, how many chores will each kid get? ***Ans:*** 6 chores each.
   a) What if there were only 6 kids? ***Ans:*** 7 chores.
   b) Does each kid get more or less chores if there are 3 kids?
   Ans: More chores.

6. How many stops will a bicyclist make on a 54 mile trip, if he is stopping every 9 miles? ***Ans:*** 5 stops, not counting the last one.

7. Arthur worked on a school project for 42 days. How many weeks is that? ***Ans:*** 6 weeks.

8. If one stapler costs $3, how many staplers can you buy for $15?
   Ans: 5 staplers.

9. One stock share costs $7. How many stock shares can you buy for $42? ***Ans:*** 6 stock shares. You can solve the problem without even knowing what a stock share is. Hooray!

10. If each gizmo needs 5 doohickeys, how many gizmos need 35 doohickeys? ***Ans:*** 7 gizmos.
11. After helping Mr. Pitts to pick pears, 6 helpers received 42 pounds of pears to divide among themselves. How many pounds did each get? ***Ans:*** 7 pounds.
12. How many times 4 is contained in 24? In 32? In 36? ***Ans:*** 6, 8, and 9.
13. How many times 6 is contained in 24? In 42? In 48? ***Ans:*** 4, 7, and 8.
14. How many times 7 is contained in 28? In 42? In 56? ***Ans:*** 4, 6, and 8.
15. A ticket to Buffalo costs $9. How many tickets can you buy for $54? ***Ans:*** 6 tickets.
16. If one ticket is $9, how much do 7 tickets cost? ***Ans:*** $63.
17. If one turkey has four legs, how many legs do 9 turkeys have? ***Ans:*** Ha-ha, turkeys have only 2 legs, but if they had 4, then it would be 36.
18. If 6 pencil holders cost $42, how much does one cost? ***Ans:*** $7
19. If 7 pencil holders together hold 56 pencils, how many pencils are in each holder? ***Ans:*** 8 pencils.
20. If 7 firefighters ride on one fire truck, how many firefighters ride on 9 trucks? ***Ans:*** 63 firefighters.
21. It takes 9 logs to make a raft.
    a) How many logs does it take to make 4 rafts? ***Ans:*** 36 logs.
    b) How many logs does it take to make 6 rafts? ***Ans:*** 54 logs.
    c) How many logs does it take to make 8 rafts? ***Ans:*** 72 logs.
    d) How many logs does it take to make 9 rafts? ***Ans:*** 81 logs.
22. If it takes 5 minutes to inflate 35 balloons, how many balloons can you inflate in one minute? ***Ans:*** 7 balloons.
23. If one artist uses 8 brushes to paint a landscape, how many brushes would 6 artists use? ***Ans:*** 48 brushes.

24. A rabbit can jump 7 feet in one jump. How many feet can it jump in 5 jumps? ***Ans:*** 35 feet.
    How many feet can you jump in 5 jumps?

25. A gold digger divided 54 ounces of gold into 6 bags. How many ounces of gold were in each bag? ***Ans:*** 9 ounces.

26. If 45 acres of land are divided into 5 equal parcels, how big is each parcel? ***Ans:*** 9 acres.
    a) If 7 oak trees are planted on each parcel, how many trees were planted on 5? ***Ans:*** 35 trees.

27. If a teaspoon holds 5 grams of water. How many grams of water are in 6 spoons? ***Ans:*** 30 grams. A gram is a very small weight. There are almost 30 grams in each ounce of water and 3,785 grams in each gallon.

28. If a tablespoon holds 15 grams of water, how many teaspoons is that? ***Ans:*** 3 teaspoons, because each teaspoon is 5 grams.

29. If a spider catches 8 flies in one week, how many flies will it catch in 4 weeks? ***Ans:*** 32 flies.

30. If a fly can catch 4 spiders in one week, how many spiders will it catch in 7 weeks? ***Ans:*** 28 spiders, as silly as that might be.

31. It takes Benjie 8 minutes to take a bath. For Angie, it takes 5 times longer. How long does it take Angie? ***Ans:*** 40 minutes.

32. A 24 hour work day was divided into 3 shifts. How long is each shift? ***Ans:*** 8 hours.

33. A square has 4 angles. How many squares have 24 angles? ***Ans:*** 6 squares.

34. A pentagon has 5 angles. How many pentagons have 35 angles? ***Ans:*** 7 pentagons.

35. If a hexagon has 6 angles. How many hexagons have 54 angles? ***Ans:*** 9 hexagons.

36. An octagon has 8 angles. How many angles will 8 octagons have? ***Ans:*** 64 angles.
    Do you know the name of a figure with 10 angles? It's decagon. And polygon is a figure with many angles, because poly means 'many' in Greek.

37. A postman delivered 63 newspapers and 7 times fewer magazines. How many magazines did he deliver?
Ans: 9 magazines.

38. One astronaut circled the Earth 6 times, another 8 times more. How many times did the second astronaut circle the Earth?
Ans: 48 times.

39. There are 6 ounces of tomato juice in one can. How many ounces are in 7 cans? ***Ans:*** 42 ounces.

40. If it takes 7 tomatoes to make one can of juice, how many tomatoes does it take to make 7 cans? ***Ans:*** 49 tomatoes.

41. A cat crawled 6 feet in the grass and then ran 6 times as many feet to catch a squirrel. How many feet did it crawl and run?
Ans: 42 feet (6 feet crawling and 36 feet running).

42. If a team paints 6 walls in one day, how many walls can they paint in one week? ***Ans:*** 42 walls.

43. One printer prints 3 pages per minute. Another prints twice as fast. How many pages do both print in 8 minutes?
Ans: 72 pages. The first printer will print 24 pages, the second 48. Together they'll print 24 + 48 = 72 (pages).

44. Making a retaining wall, a mason laid 9 bricks in one row. He needs to make 7 rows. How many total number of brick will he need? ***Ans:*** 63 bricks.

45. There are 9 holes in one slice of Swiss cheese. How many holes are in 6 slices? ***Ans:*** 54 holes.

46. If there are 7 vertebrae bones in one neck, how many bones are in 8 necks? ***Ans:*** 56 bones.

47. If Scott makes 8 spelling errors on every page, how many errors will he make on 9 pages? ***Ans:*** 72 errors.

48. How many squares are on a chess board, if there are 8 rows with 8 squares in each row? ***Ans:*** 64 squares.

49. Each costume in a school play uses 9 safety pins. How many pins will they need for 9 costumes? ***Ans:*** 81 pins.

50. If each battery has 9 volts, how many volts are in 5 batteries? ***Ans:*** 45 volts.

51. If each door has 5 hinges, how many hinges do 8 doors have? ***Ans:*** 40 hinges.

52. If each secret potion has 7 parts, how many parts are in 5 potions? ***Ans:*** 35 parts.

2

MULTIPLICATION OF SINGLE DIGITS AND DIVISION WITH NUMBERS UP TO 90

EXERCISE I

Check multiplication facts. Ask child to give the answer quickly.

2 × 9 = ? ***Ans:*** 18	4 × 7 = ? ***Ans:*** 28	6 × 8 = ? ***Ans:*** 48
4 × 4 = ? ***Ans:*** 16	7 × 5 = ? ***Ans:*** 35	5 × 9 = ? ***Ans:*** 45
5 × 5 = ? ***Ans:*** 25	4 × 9 = ? ***Ans:*** 36	6 × 7 = ? ***Ans:*** 42
8 × 3 = ? ***Ans:*** 24	7 × 6 = ? ***Ans:*** 42	6 × 9 = ? ***Ans:*** 54
4 × 6 = ? ***Ans:*** 24	8 × 4 = ? ***Ans:*** 32	8 × 7 = ? ***Ans:*** 56
7 × 3 = ? ***Ans:*** 21	5 × 6 = ? ***Ans:*** 30	5 × 8 = ? ***Ans:*** 40
4 × 5 = ? ***Ans:*** 20	6 × 4 = ? ***Ans:*** 24	8 × 9 = ? ***Ans:*** 72
3 × 9 = ? ***Ans:*** 27	7 × 7 = ? ***Ans:*** 49	9 × 9 = ? ***Ans:*** 81

EXERCISE II

12 ÷ 2 = ? ***Ans:*** 6	16 ÷ 8 = ? ***Ans:*** 2	36 ÷ 4 = ? ***Ans:*** 9
12 ÷ 3 = ? ***Ans:*** 4	32 ÷ 4 = ? ***Ans:*** 8	25 ÷ 5 = ? ***Ans:*** 5
12 ÷ 4 = ? ***Ans:*** 3	24 ÷ 3 = ? ***Ans:*** 8	18 ÷ 3 = ? ***Ans:*** 6
12 ÷ 6 = ? ***Ans:*** 2	32 ÷ 8 = ? ***Ans:*** 4	36 ÷ 6 = ? ***Ans:*** 6
16 ÷ 2 = ? ***Ans:*** 8	27 ÷ 3 = ? ***Ans:*** 9	42 ÷ 6 = ? ***Ans:*** 7
16 ÷ 4 = ? ***Ans:*** 4	28 ÷ 4 = ? ***Ans:*** 7	45 ÷ 5 = ? ***Ans:*** 9

49 ÷ 7 = ? ***Ans:*** 7	56 ÷ 8 = ? ***Ans:*** 7	73 ÷ 9 = ? ***Ans:*** 7
36 ÷ 6 = ? ***Ans:*** 6	63 ÷ 9 = ? ***Ans:*** 7	81 ÷ 9 = ? ***Ans:*** 9
54 ÷ 6 = ? ***Ans:*** 9	45 ÷ 9 = ? ***Ans:*** 5	42 ÷ 6 = ? ***Ans:*** 6
42 ÷ 7 = ? ***Ans:*** 6	64 ÷ 8 = ? ***Ans:*** 8	57 ÷ 7 = ? ***Ans:*** 8

EXERCISE III

1. What number do you multiply by 2 to get 18? ***Ans:*** 9
2. What number do you multiply by 7 to get 21? ***Ans:*** 3
3. What number do you multiply by 4 to get 24? ***Ans:*** 6
4. What number do you multiply by 5 to get 30? ***Ans:*** 6
5. What number do you multiply by 6 to get 36? ***Ans:*** 6
6. What number do you multiply by 8 to get 40? ***Ans:*** 5
7. What number do you multiply by 4 to get 36? ***Ans:*** 9
8. What number do you multiply by 9 to get 54? ***Ans:*** 6
9. What number do you multiply by 7 to get 49? ***Ans:*** 9
10. What number do you multiply by 8 to get 72? ***Ans:*** 9
11. Name all single-digit numbers by which 12 can be divided? ***Ans:*** 1, 2, 3, 4, 6
12. Name all single-digit numbers by which 9 can be divided? ***Ans:*** 1, 3
13. Name all single-digit numbers by which 24 can be divided? ***Ans:*** 1, 2, 3, 4, 6, 8
14. Name all single-digit numbers by which 36 can be divided? ***Ans:*** 1, 2, 3, 4, 6, 9
15. Name all single-digit numbers by which 49 can be divided? ***Ans:*** 1, 7

EXERCISE IV

In this exercise, we will ask you to name all two *single-digit* pairs that multiplied together make the number, except for 1 and the number itself.

- Can you name all single-digit factors of 8 other than 1 and 8?
  Ans: Factors 2 and 4. When multiplied they make 8.
- Can you name all single-digit factors of 12?
  Ans: Number 12 has two pairs of single-digit factors:
  2 and 4 make a pair, and also 3 and 4.

1. Name all single-digit factor pairs to make 14? ***Ans:*** 2 and 7
2. Name all single-digit factor pairs to make 16? ***Ans:*** 2 and 8 and also 4 and 4
3. Name all single-digit factor pairs to make 18? ***Ans:*** 2 and 9 and also 3 and 6
4. Name all single-digit factor pairs to make 20? ***Ans:*** 4 and 5
5. Name all single-digit factor pairs to make 28? ***Ans:*** 4 and 7
6. Name all single-digit factor pairs to make 21? ***Ans:*** 3 and 7
7. Name all single-digit factor pairs to make 24? ***Ans:*** 4 and 6 and also 3 and 8
8. Name all single-digit factor pairs to make 27? ***Ans:*** 3 and 9
9. Name all single-digit factor pairs to make 42? ***Ans:*** 6 and 7
10. Name all single-digit factors pairs to make 49? ***Ans:*** 7 and 7
11. Name all single-digit factors pairs to make 36? ***Ans:*** 4 and 9 and also 6 and 6
12. Name all single-digit factors pairs to make 56? ***Ans:*** 8 and 7
13. Name all single-digit factors pairs to make 54? ***Ans:*** 6 and 9

3

COMMON DIVISOR AND GREATEST COMMON DIVISOR

Two or more numbers may have a *common divisor,* or the same number(s) by which we can divide all of them. For example, the numbers 4 and 8 have two common divisors: 2 and 4. Usually, we don't call "1" a common divisor.

The *greatest common divisor* is the largest number by which you can divide two or more numbers. For example, numbers 12 and 18 have several common divisors: 2, 3, and 6. But only 6 is the greatest common divisor for these numbers.

- The numbers 10 and 15 have 5 as their common divisor.
- The numbers 14 and 21 have 7 as a common divisor.
- The numbers 18 and 27 have 9 as common divisor and also 3.
- The numbers 30 and 50 have 5 and 10 as common divisors and also 2.
- The numbers 24 and 32 have 2, 3, 4, and 8 as common divisors.

1. What are common divisors for 8 and 10? ***Ans:*** 2
2. What are common divisors for 6 and 9? ***Ans:*** 3

3. What are common divisors for 12 and 15? ***Ans:*** 3
4. What are common divisors for 20 and 25? ***Ans:*** 5
5. What are common divisors for 15 and 18? ***Ans:*** 3
6. What are common divisors for 15 and 16? ***Ans:*** None
7. What are common divisors for 7 and 14? ***Ans:*** 7
8. What are common divisors for 21 and 27? ***Ans:*** 3
9. What are common divisors for 21 and 25? ***Ans:*** None
10. What are common divisors for 10, 20 and 30?
    Ans: 10 (and also 2)
11. What are common divisors for 6, 18, 24? ***Ans:*** 2, 3, and 6

WORD PROBLEMS

1. There were 16 parrots in 3 cages. The zookeeper added 2 parrots to each cage. How many parrots are in all cages now?
   Ans: 22 parrots.
   Solution: He added 2 (parrots) × 3 (cages) = 6 (parrots). Now, there are 16 + 6 = 22 (parrots). Don't get tricked, the problem didn't ask how the parrots were divided among three cages.
2. Kumar received 5 cards for his high school graduation and 4 times as many for his birthday. How many cards did he receive?
   Ans: 25 cards (5 × 4 = 20; 5 + 20 = 25)
3. There were 4 boxes with 6 books in each box. Then, the librarian brought 2 more boxes. How many books are there now? ***Ans:*** 36 books.
   Solutions: There are two ways to solve the problem.
   a) There were 6 (books) × 4 (boxes) = 24 (books) at first. They added 6 (books) × 2 (boxes) = 12 (books). Now there are 24 + 12 = 36 (books).
   b) Better way. There were 4 boxes, now there are 4 + 2 = 6 (boxes). If there are 6 books in each box, then 6 (books) × 6 (boxes) = 36 (books).
4. What are two *single-digit* factors of 42? ***Ans:*** 6 and 7.

5. There were 5 carrot patches with 8 carrots in each patch. Mrs. Bunny pulled out 17 carrots. How many carrots were left? ***Ans:*** 23 carrots (8 × 5 = 40, then 40 - 17 = 23).

6. I saw 7 rows of vehicles in a parking lot, with 7 in each row. There were 18 trucks, the rest were cars. How many cars were on the lot? ***Ans:*** 31 cars (7 × 7 = 49; then, 49 - 18 = 31).

7. There are 8 school busses in the parking lot. Each bus has 6 wheels. How many wheels do all the busses have? ***Ans:*** 48 wheels.

8. If a snail moves 3 inches in one minute, how far can it move in 9 minutes? ***Ans:*** 27 inches.
   To help it to move, the snail produces slime which protects the snail and helps it to glide over sharp objects without being injured. If you are a snail, you love your slime.

9. Ginger counted 6 helicopters and 4 times as many airplanes in an airfield. How many helicopters and airplanes together did she count? ***Ans:*** 30 aircraft.

10. Which two numbers when multiplied make 28?
    Ans: 4 and 7, and also 2 and 14. You are also right if you said 1 and 28, but that would be too easy.

11. There are 5 red flowers in the vase and 4 times as many white flowers. How many flowers are in the vase? ***Ans:*** 25 flowers.

12. In the showroom, there are 3 sofas with 5 pillows on each and 6 sofas with 4 pillows on each. How many pillows are there?
    Ans: 39 pillows.
    Solution: 5 pillows × 3 (sofas) = 15 pillows; 4 pillows × 6 (sofas) = 24 pillows. Then, 15 + 24 = 39 (pillows).

13. After putting 6 pictures in each of the 8 envelopes, Omar found 17 more pictures on the desk. How many pictures were there altogether? ***Ans:*** 65 pictures (6 × 8 = 48, 48 + 17 = 65).

14. Latisha lost 4 chess games but won 9 times as many. How many games did she play if there were no draws? ***Ans:*** 40 games.

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