Practice C

Translate Between Words and Math

Write each phrase as a numerical or algebraic expression.

1. the sum of 69, 140, and 300

_____

2. 95 less than the quotient of x and 12

_____

3. 144 less than 500

_____

4. 22 added to the product of 14 and n

_____

5. The difference of 98 and p, added to 4

_____

6. 85 more than twice m

_____

Write two phrases for each expression.

7. $\dfrac{150}{n}$

_____

_____

8. $79 - w$

_____

_____

9. $12 + 29q$

_____

_____

10. $(87 - p) + 11$

_____

_____

11. $(28 \div x) - 6$

_____

_____

12. $(4 + z) - 18z$

_____

_____

13. Mohamed bought several bottles of juice for $3 each. He paid for them all with a $20 bill. If j represents the number of bottles Mohamed bought, what expression represents the change he would receive?

_____

14. A giant bamboo plant grew 18 inches per year. When Mrs. Sanchez started measuring the plant it was 5 inches tall. If y represents the number of years she measured the plant, what expression represents its height?

_____

Practice B
Translate Between Words and Math

Write an expression.

1. Terry's essay has 9 more pages than Stacey's essay. If s represents the number of pages in Stacey's essay, write an expression for the number of pages in Terry's essay.

$s + 9$

2. Let z represent the number of students in a class. Write an expression for the number of students in 3 equal groups.

$\dfrac{z}{3}$

Write each phrase as a numerical or algebraic expression.

3. 24 multiplied by 3   **4.** n multiplied by 14   **5.** w added to 64

$24 \cdot 3$ $n \cdot 14$ $64 + w$

6. the difference of 58 and 6   **7.** m subtracted from 100   **8.** the sum of 180 and 25

$58 - 6$ $100 - m$ $180 + 25$

9. the product of 35 and x **10.** the quotient of 63 and 9   **11.** 28 divided by p

$35x$ $63 \div 9$ $28 \div p$

Write two phrases for each expression. Possible answers are given.

12. $n + 91$ n plus 91; 91 more than n

13. $35 \div r$ 35 divided by r; the quotient of 35 and r

14. $20 - s$ 20 minus s; s less than 20

15. Charles is 3 years older than Paul. If y represents Paul's age, what expression represents Charles's age?

$y + 3$

16. Maya bought some pizzas for $12 each. If p represents the number of pizzas she bought, what expression shows the total amount she spent?

$12p$

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Practice C
Translate Between Words and Math

Write each phrase as a numerical or algebraic expression.

1. the sum of 69, 140, and 300

$69 + 140 + 300$

2. 95 less than the quotient of x and 12

$(x \div 12) - 95$

3. 144 less than 500

$500 - 144$

4. 22 added to the product of 14 and n

$14n + 22$

5. The difference of 98 and p, added to 4

$4 + (98 - p)$

6. 85 more than twice m

$2m + 85$

Write two phrases for each expression. Possible answers are given.

7. $\dfrac{150}{n}$

150 divided by n;
the quotient of 150 and n

8. $79 - w$

79 take away w;
the difference of 79 and w

9. $12 + 29q$

12 plus the product of 29 and q;
the product of 29 and q added to 12

10. $(87 - p) + 11$

the difference of 87 and p, plus 11; 11 added to 87 minus p

11. $(28 \div x) - 6$

6 less than the quotient of 28 and x; 28 divided by x, minus 6

12. $(4 + z) - 18z$

the sum of 4 and z, minus the product of 18 and z;
4 plus z, minus 18 times z

13. Mohamed bought several bottles of juice for $3 each. He paid for them all with a $20 bill. If j represents the number of bottles Mohamed bought, what expression represents the change he would receive?

$20 - 3j$

14. A giant bamboo plant grew 18 inches per year. When Mrs. Sanchez started measuring the plant it was 5 inches tall. If y represents the number of years she measured the plant, what expression represents its height?

$5 + 18y$

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Reteach
Translate Between Words and Math

There are key words that tell you which operations to use for mathematical expressions.

Addition (combine)	Subtraction (less)	Multiplication (put together groups of equal parts)	Division (separate into equal groups)
add	minus	product	quotient
plus	difference	times	divide
sum	subtract	multiply	
total	less than		
increased by	decreased by		
more than	take away		

You can use key words to help you translate between word phrases and mathematical phrases.

A. 3 plus 5   **B.** 3 times x **C.** 5 less than p **D.** h divided by 6

$3 + 5$ $3x$ $p - 5$ $h \div 6$

Write each phrase as a numerical or algebraic expression.

1. 4 less than 8   **2.** q divided by 3   **3.** f minus 6   **4.** d multiplied by 9

$8 - 4$ $q \div 3$ $f - 6$ $d \cdot 9$

You can use key words to write word phrases for mathematical phrases.

A. $7k$
- the product of 7 and k
- 7 times k

B. $5 - 2$
- 5 minus 2
- 2 less than 5

Write a phrase for each expression. Possible answers are given.

5. $z \div 4$ **6.** $5 \cdot 6$ **7.** $m - 6$ **8.** $s + 3$

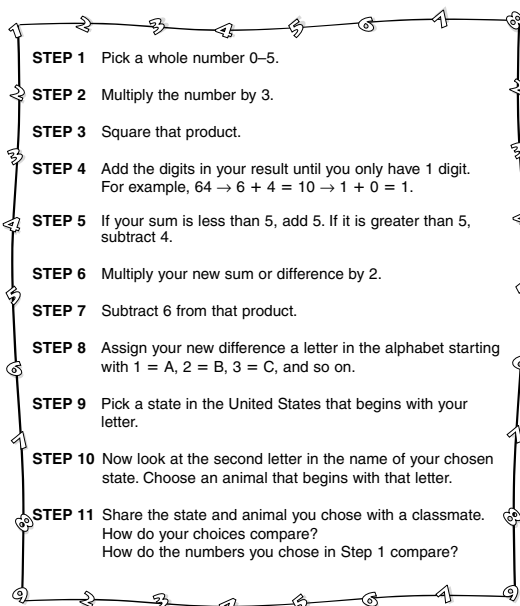z divided by 4   5 times 6   6 less than m s plus 3

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Challenge
Animal State

Follow the steps below in the exact order they are given. Do not skip ahead!

STEP 1 Pick a whole number 0–5.

STEP 2 Multiply the number by 3.

STEP 3 Square that product.

STEP 4 Add the digits in your result until you only have 1 digit. For example, $64 \rightarrow 6 + 4 = 10 \rightarrow 1 + 0 = 1$.

STEP 5 If your sum is less than 5, add 5. If it is greater than 5, subtract 4.

STEP 6 Multiply your new sum or difference by 2.

STEP 7 Subtract 6 from that product.

STEP 8 Assign your new difference a letter in the alphabet starting with 1 = A, 2 = B, 3 = C, and so on.

STEP 9 Pick a state in the United States that begins with your letter.

STEP 10 Now look at the second letter in the name of your chosen state. Choose an animal that begins with that letter.

STEP 11 Share the state and animal you chose with a classmate. How do your choices compare? How do the numbers you chose in Step 1 compare?

All students should end with the state Delaware. Most students will choose an elephant, but accept any animal that begins with the letter E.

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