

**Write an algebraic expression for each word phrase.**

Variables and Expressions

1. 10 less than  $x$

2. 5 more than  $d$

3. 7 minus  $f$

4. the sum of 11 and  $k$

5.  $x$  multiplied by 6

6. a number  $t$  divided by 3

7. one fourth of a number  $n$

8. the product of 2.5 and a number  $t$

9. the quotient of 15 and  $y$

10. a number  $q$  tripled

11. 3 plus the product of 2 and  $h$

12. 3 less than the quotient of 20 and  $x$

**Write a word phrase for each algebraic expression.**

13.  $n + 6$

14.  $5 - c$

15.  $11.5 + y$

16.  $\frac{x}{4} - 17$

17.  $3x + 10$

18.  $10x + 7z$

**Write a rule in words and as an algebraic expression to model the relationship in each table.**

19. The local video store charges a monthly membership fee of \$5 and \$2.25 per video

Videos ( $v$ )	Cost ( $c$ )
1	\$7.25
2	\$9.50
3	\$11.75

(1)  $x - 10$ , (2)  $d + 5$ , (3)  $7 - f$ , (4)  $11 + k$ , (5)  $6x$ , (6)  $\frac{t}{3}$ , (7)  $\frac{1}{4}n$ , (8)  $2.5t$ , (9)  $\frac{15}{y}$ , (10)  $3q$ , (11)  $3 + 2h$ , (12)  $\frac{20}{x} - 3$ , (13) 6 more than a number  $n$ , (14) 5 minus  $c$ , (15)  $y$  more than 11.5, (16) 17 less than the quotient of  $x$  and 4, (17) 10 more than the product of 3 and  $x$ , (18) 10 times a number  $x$  plus 7 times a number  $z$ , (19)  $5 + 2.25v$

20. Dorothy gets paid to walk her neighbor's dog. For every week that she walks the dog, she earns \$10.

Weeks ( $w$ )	Pay ( $p$ )
4	\$40.00
5	\$50.00
6	\$60.00

**Write an algebraic expression for each word phrase.**

21. 8 minus the quotient of 15 and  $y$
22. a number  $q$  tripled plus  $z$  doubled
23. the product of 8 and  $z$  plus the product of 6.5 and  $y$
24. the quotient of 5 plus  $d$  and 12 minus  $w$
25. **Error Analysis** A student writes  $5y \cdot 3$  to model the relationship *the sum of 5y and 3*. Explain the error.
26. **Error Analysis** A student writes *the difference between 15 and the product of 5 and y* to describe the expression  $5y - 15$ . Explain the error.
27. Jake is trying to mail a package to his grandmother. He already has  $s$  stamps on the package. The postal worker tells him that he's going to have to double the number of stamps on the package and then add 3 more. Write an algebraic expression that represents the number of stamps that Jake will have to put on the package.

(20)  $10w$ , (21)  $8 - \frac{15}{y}$ , (22)  $3q+2z$ , (23)  $8z+6.5y$ , (24)  $\frac{5+d}{12-w}$ , (25) The word *sum* indicates addition, but the student has multiplied, (26) The student had subtracted backwards. The expressions should be in the order given.