

Translating Words into Expressions

Name: _____

Date: _____

Score: _____ / 24

Q Quick Review

A **variable** is a letter that stands for an unknown number. An **algebraic expression** mixes numbers, variables, and operations — but no equals sign. To translate words, watch for key phrases: **sum** and **more than** mean add, **difference** and **less than** mean subtract, **product** and **times** mean multiply, and **quotient** means divide. Be careful with order: “5 less than n ” is $n - 5$, not $5 - n$. Reading the phrase slowly and underlining the operation words makes the translation much easier.

◇ **Example:** Write an expression for “7 more than twice a number n .”

⇒ Let’s break the phrase into pieces. “Twice a number n ” means we multiply n by 2, giving $2n$. Then “7 more than” that means we add 7 to it. So we get $2n + 7$. A quick check: if $n = 10$, twice that is 20, and 7 more is 27 — and $2(10) + 7 = 27$ matches perfectly.

Answer: $2n + 7$

PRACTICE

Write an algebraic expression for each phrase.

- | | | | |
|--------------------------------|-------|--|-------|
| 1. a number x plus 9 | _____ | 11. the difference of r and 7 | _____ |
| 2. a number y minus 4 | _____ | 12. 3 times the sum of x and 2 | _____ |
| 3. the sum of n and 12 | _____ | 13. half of a number h | _____ |
| 4. 6 times a number k | _____ | 14. 4 more than the product of 5 and n | _____ |
| 5. the product of 8 and m | _____ | 15. a number z increased by 15 | _____ |
| 6. a number p divided by 3 | _____ | 16. a number c decreased by 8 | _____ |
| 7. 5 less than a number w | _____ | 17. the sum of $2n$ and 6 | _____ |
| 8. 10 more than a number t | _____ | 18. 7 less than 3 times a number m | _____ |
| 9. twice a number b | _____ | 19. the quotient of a number v and 5 | _____ |
| 10. the quotient of 24 and d | _____ | 20. 9 times the difference of x and 1 | _____ |

◆ Word Problems

21. Jake has n trading cards. His sister has 6 more than he does. Write an expression for how many cards his sister has.

22. A bag of apples costs $\$a$. Write an expression for the cost of 4 bags of apples. _____
23. A pizza is cut into equal slices and shared by p people. If there are 12 slices, write an expression for how many slices each person gets. _____
24. A taxi charges a $\$3$ flat fee plus $\$2$ for each mile m . Write an expression for the total cost of a ride. _____



Answer Keys

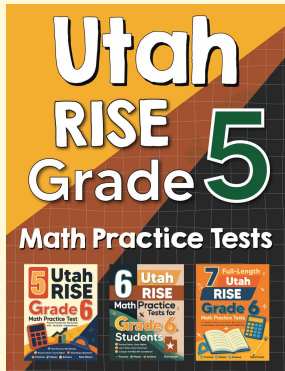
- | | |
|--|--|
| <ol style="list-style-type: none"> 1. $x + 9$ 2. $y - 4$ 3. $n + 12$ 4. $6k$ 5. $8m$ 6. $\frac{p}{3}$ 7. $w - 5$ 8. $t + 10$ 9. $2b$ 10. $\frac{24}{d}$ 11. $r - 7$ 12. $3(x + 2)$ | <ol style="list-style-type: none"> 13. $\frac{h}{2}$ 14. $5n + 4$ 15. $z + 15$ 16. $c - 8$ 17. $2n + 6$ 18. $3m - 7$ 19. $\frac{v}{5}$ 20. $9(x - 1)$ 21. $n + 6$ 22. $4a$ 23. $\frac{12}{p}$ 24. $2m + 3$ |
|--|--|

Step-by-Step Explanations

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. "Plus" means add, so we write $x + 9$. 2. "Minus" means subtract: $y - 4$. 3. "Sum" means addition, so $n + 12$. 4. "Times" means multiply: $6 \times k$, written $6k$. 5. "Product" means multiply, so $8m$. 6. "Divided by" means division: $\frac{p}{3}$. 7. "5 less than w" starts with w and takes 5 away: $w - 5$. 8. "10 more than t" means add 10 to t: $t + 10$. 9. "Twice" means two times, so $2b$. 10. "Quotient" means divide: $24 \div d = \frac{24}{d}$. 11. "Difference" means subtract, in order: $r - 7$. 12. The sum $x + 2$ goes in parentheses, then multiply by 3: $3(x + 2)$. 13. "Half of" means divide by 2: $\frac{h}{2}$. | <ol style="list-style-type: none"> 14. The product $5n$ first, then 4 more: $5n + 4$. 15. "Increased by" means add: $z + 15$. 16. "Decreased by" means subtract: $c - 8$. 17. Add $2n$ and 6 together: $2n + 6$. 18. The product $3m$ first, then take 7 away: $3m - 7$. 19. "Quotient of v and 5" means v divided by 5: $\frac{v}{5}$. 20. The difference $x - 1$ goes in parentheses, then times 9: $9(x - 1)$. 21. "6 more than" Jake's amount means add 6 to n, so his sister has $n + 6$ cards. 22. Four bags at $\\$a$ each means 4 times a, written $4a$ dollars. 23. Sharing 12 slices equally among p people means divide: each person gets $\frac{12}{p}$ slices. 24. The miles cost $2m$ dollars, and the flat fee adds 3 more, so the total is $2m + 3$ dollars. |
|--|---|



Want Even More Practice? Check Out Our Other Utah RISE Test Books!



Utah RISE Grade 6 Math Preparation Bundle

18 full-length practice tests across three books
(5 + 6 + 7)

No repeated questions—maximum practice value!



18 Tests!
3 Books
One Bundle

Important: All our test books contain **unique, completely different tests** from each other! Each book offers fresh practice questions—no repeats!

5 Practice Tests

- ✓ 5 complete practice tests with detailed explanations
- ✓ Perfect foundation for RISE test preparation
- ✓ Builds confidence and test-taking skills
- ✓ High-quality questions aligned with state standards

Start your practice journey!

6 Practice Tests

- ✓ 6 complete practice tests with detailed explanations
- ✓ **Unique tests**—different from the 5 tests book
- ✓ Perfect for more practice after mastering 5 tests
- ✓ Builds even more confidence and test-taking skills
- ✓ Same high-quality questions aligned with standards

Take your practice to the next level!

7 Practice Tests

- ✓ 7 complete practice tests for maximum preparation
- ✓ **Unique tests**—different from 5 and 6 tests books
- ✓ The most comprehensive practice for Grade 6
- ✓ Ideal for students aiming for top scores
- ✓ Extensive practice builds mastery and confidence

Go all the way with comprehensive practice!