

Words that mean addition	Addition Phrases	Translation in math symbols
plus	"two plus a number"	$2 + x$
and	"eight and a number"	$8 + x$
added to	"negative one added to a number"	$x + (-1)$
greater than	"nine greater than a number"	$x + 9$
more than	"three more than a number"	$x + 3$
increased by	"six increased by a number"	$6 + x$
total	"the total of ten and a number"	$10 + x$
sum of	"the sum of eleven and a number"	$11 + x$

Translate the following phrases to math symbols.

1. a number plus one hundred.
2. the sum of thirteen and a number.
3. negative three added to a number.
4. three increased by a number.
5. a number and forty-three.
6. two greater than a number.
7. the total of seven and a number.
8. six more than a number.

Words that mean subtraction	Subtraction Phrases	Translation in math symbols
minus	"a number minus three"	$x - 3$
from	"a number from two"	$2 - x$
less	"a number less twelve"	$x - 12$
take away	"a number take away twenty"	$x - 20$
less than	"five less than a number"	$x - 5$
decreased by	"a number decreased by -1"	$x - (-1)$
difference of	"the difference of a number and two"	$x - 2$
fewer than	"four fewer than a number"	$x - 4$

Translate the following phrases to math symbols.

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| <p>9. ten fewer than a number.</p> <p>11. eight minus a number.</p> <p>13. two from a number .</p> <p>15. five less than a number.</p> | <p>10. the difference of fourteen and a number.</p> <p>12. twelve decreased by a number.</p> <p>14. twenty less than a number.</p> <p>16. two less a number.</p> |
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Words that mean multiplication	Multiplication Phrases	Translation in math symbols
times	"eight times a number"	$8x$
product	"the product of seven and a number"	$7x$
at	"12 at \$1.25 each"	$12(1.25)$
double, triple, ect.	"triple a number"	$3x$
twice	"twice a number"	$2x$
of (fractions or percent of)	"12% of a number"	$.12x$

Translate the following phrases to math symbols.

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| <p>17. four times a number.</p> <p>19. seven bananas at seventy-five cents each.</p> <p>21. double a number.</p> <p>23. triple a number.</p> | <p>18. the product of nine and a number.</p> <p>20. three fourths of a number.</p> <p>22. eight percent of a number.</p> <p>24. twice a number.</p> |
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Words that mean division	Division Phrases	Translation in math symbols
quotient of	"The quotient of two and a number"	$\frac{2}{x}$
half of	"half of a number"	$\frac{x}{2}$ or $\frac{1}{2}x$
goes into	"nine goes into a number"	$\frac{x}{9}$
per	"30 miles per 2 hours"	$\frac{30}{2}$
shared equally among	"a number shared equally among ten"	$\frac{x}{10}$
divided by	"thirteen divided by a number"	$\frac{13}{x}$

Translate the following phrases to math symbols.

25. the quotient of a number and nineteen. 26. a number divided by twenty-five.
27. half of eighteen. 28. two hundred miles per ten gallons.
29. a number goes into one thousand. 30. fifteen pieces shared equally among three.
31. the quotient of twenty-five and a number. 32. seven goes into a number.

Words that mean equals	Equation Phrases	Translation in math symbols
is	"a number is eight"	$x=8$
is the same as	"a number is the same as fourteen"	$x=14$
gives	"four gives a number"	$4=x$
will be	"a number will be twelve"	$x=12$
was	"a number was nine"	$x=9$
is equivalent to	"six is equivalent to a number"	$6=x$

Translate the following phrases to math symbols.

33. two times a number is equivalent to eight. 34. a number plus three is twelve.
35. the price will be half of original amount 36. the weight is two pounds more than the last
37. triple a number is the same as eighteen. 38. the number was four.

Combination of many translation words.

Example 1

The sum of twenty and a number is fifty.	The word "sum" indicates addition.	$\underline{\quad} + \underline{\quad}$
The sum of <u>twenty and a number</u> is fifty.	The word sum tells us that we will add two quantities. The two quantities follow the word "of" and are separated by the word "and".	$20 + x$
The sum of twenty and a number is <u>fifty</u> .	The word "is" stands for equals. This expression equals 50	$20 + x = 50$

Example 2

<u>Twelve more than</u> three times a number is thirty-four.	The words "more than" indicates that 12 will be added to a quantity. The quantity follows the word "than."	$\underline{\quad} + 12$
Twelve more than <u>three times a number</u> is thirty-four.	The word "times" indicates multiplication. The two numbers multiplied are 3 and a number.	$3x + 12$
Twelve more than three times a number is <u>thirty-four</u> .	The word "is" stands for equals. This expression equals 34	$3x + 12 = 34$

Example 3

<u>Twenty-two less than</u> two times a number is forty.	The words "less than" indicates that 22 will be subtracted from a quantity. The quantity follows the word "than."	$\underline{\hspace{1cm}} - 22$
Twenty-two less than <u>two times a number</u> is forty	The word "times" indicates multiplication. The two numbers multiplied are 2 and a number.	$2x - 22$
Twenty-two less than two times a number <u>is forty</u> .	The word "is" stands for equals. This expression equals 40.	$2x - 22 = 40$

Example 4

<u>Nine less than</u> two times the sum of a number and one is thirteen.	The words "less than" indicates that 9 will be subtracted from a quantity. The quantity follows the word "than."	-9
Nine less than <u>two times the sum</u> of a number and one is thirteen.	The word "times" indicates multiplication. The two numbers multiplied are 2 and the sum.	$2 \cdot (\text{the sum}) - 9$ $2(\underline{\hspace{1cm}} + \underline{\hspace{1cm}}) - 9$
Nine less than two times the sum of <u>a number and one</u> is thirteen.	The word sum tells us that we will add two quantities. The two quantities follow the word "of" and are separated by the word "and".	$2(x + 1) - 9$
Nine less than two times the sum of a number and one is thirteen.	The word "is" stands for equals. This expression equals 13.	$2(x + 1) - 9 = 13$

Translate the following phrases to math symbols.

39. Three less than two times a number is ten.

40. Five more that three times the sum of a number and two is twenty.

41. Four times the difference of one and a number is fifteen.

42. Two times a number is 10 less than the number.

Answers

1. $n + 100$

2. $13 + n$

3. $x + (-3)$

4. $3 + x$

5. $y + 43$

6. $y + 2$

7. $7 + z$

8. $z + 6$

9. $a - 10$

10. $14 - n$

11. $^{\wedge} - y$

12. $12 - b$

13. $x - 2$

14. $h - 20$

15. $z - 5$

16. $2 - p$

17. $4x$

18. $9v$

19. $7(75 \text{ cents}) = 525 \text{ cents}$ or
 $7(.75 \text{ dollars}) = 5.25 \text{ dollars}$

20. $\frac{3}{4}x$

21. $2n$

22. $.08x$

23. $3b$

24. $2x$

25. $x \div 19$ or $\frac{x}{19}$

26. $b \div 25$ or $\frac{b}{25}$

27. $\frac{1}{2}(18)$ or $18 \div 2$ or $\frac{18}{2}$

28. $\frac{200 \text{ miles}}{10 \text{ gallons}}$

29. $1000 \div y$ or $\frac{1000}{y}$

30. $15 \div 3 = \frac{15}{3}$

31. $25 \div a = \frac{25}{a}$

32. $c \div 7$ or $\frac{c}{7}$

33. $2a = 8$

34. $y + 3 = 12$

35. $\text{price} = \frac{\text{original amount}}{2}$

36. $\text{weight} = \text{previous weight} + 2$

37. $3p = 18$

38. $c = 4$

39. $2d - 3 = 10$

40. $3(x + 2) + 5 = 20$

41. $4(1 - g) = 15$

42. $2y = y - 10$