

## Words and Mathematical Phrases

Operation	Example of Word Phrase	Translated into Symbols
<b>Addition</b>		
Sum	the <i>sum</i> of 5 and 12	$5 + 12$ or $12 + 5$
Total	the <i>total</i> price of three items: \$5, \$12, and \$25	$\$5 + \$12 + \$25$ (in any order)
All together	If there were 7 blue cars, 12 red cars, and 5 white cars, how many were there <i>all together</i> ?	$7 + 12 + 5$ (in any order)
Increase	<i>increase</i> 16 by 3	$16 + 3$ or $3 + 16$
Increased by	29 <i>increased by</i> 7	$29 + 7$ or $7 + 29$
Add, added to	13 <i>added to</i> 12	$13 + 12$ or $12 + 13$
Plus	17 <i>plus</i> 8	$17 + 8$ or $8 + 17$
More than	Diane had \$13 <i>more than</i> Tina who had \$45. How much did Diane have?	$\$45 + \$13$ or $\$13 + \$45$
<b>Subtraction</b>		
Subtract from, subtracted from	<i>subtract</i> 8 from 19 8 <i>subtracted from</i> 19	$19 - 8$
Difference	the <i>difference</i> between 14 and 7	$14 - 7$
Left, remaining	Of 9 items, 6 were used. How many are <i>left</i> ?	$9 - 6$
How much more; How much more than	A psychology book costs \$49 and a math book costs \$63. <i>How much more</i> does the math book cost?	$\$63 - \$49$
Decrease; decreased by	<i>decrease</i> 37 by 9 or 37 <i>decreased by</i> 9	$37 - 9$
Minus	41 <i>minus</i> 14	$41 - 14$
Fewer	11 bottles <i>fewer</i> than the 32 started with	$32 - 11$
Less	\$15 <i>less</i> an \$8 discount	$\$15 - \$8$
Less than	15 <i>less than</i> 45	$45 - 15$
<b>Multiplication</b>		
Multiply, multiplied by	<i>multiply</i> 5 by 8 or 5 <i>multiplied by</i> 8	$5 \cdot 8$ or $8 \cdot 5$
Product	the <i>product</i> of 12 and 6	$12 \cdot 6$ or $6 \cdot 12$
Times	17 <i>times</i> 3	$17 \cdot 3$ or $3 \cdot 17$
Of	one half <i>of</i> 16 six tenths <i>of</i> 1200 SCC students	$\frac{1}{2} \cdot 16$ or $16 \cdot \frac{1}{2}$ $0.6 \cdot 1200$
As many as	$\frac{4}{5}$ <i>as many</i> dogs as cats	# of dogs = $\frac{4}{5} \cdot$ (# of cats)
Twice	<i>twice</i> 15	$2 \cdot 15$ or $15 \cdot 2$
<b>Division</b>		
Divide, divided by, divide into equal parts	<i>divide</i> 28 by 7 or 28 <i>divided by</i> 7 or <i>divide</i> 28 <i>into</i> 7 <i>equal parts</i>	$28 \div 7$ or $7 \overline{)28}$ or $\frac{28}{7}$
Quotient	the <i>quotient</i> of 18 and 3	$18 \div 3$ or $3 \overline{)18}$ or $\frac{18}{3}$
Per	miles <i>per</i> gallon	miles $\div$ gallons or gal $\overline{)}$ miles or $\frac{\text{miles}}{\text{gal}}$
Average	the <i>average</i> of 12, 18, and 23	$\frac{12+18+23}{3}$
Ratio	the <i>ratio</i> of 20 and 5	$20 \div 5$ or $5 \overline{)20}$ or $\frac{20}{5}$
Distribute evenly or equally	<i>distribute</i> \$200 evenly between 4 people	$200 \div 4$ or $4 \overline{)200}$ or $\frac{200}{4}$
Cut up, cut into	<i>cut</i> 15 feet of ribbon <i>into</i> 5 equal pieces	$15 \div 5$ or $5 \overline{)15}$ or $\frac{15}{5}$

## Inequalities

$<$

less than

the sum of x and y is *less than* 20

$$x + y < 20$$

$>$

more/greater/higher than

the sum of x and y is *greater than* 20  
the temperature is *higher than* 85

$$x + y > 20$$

$$T > 85$$

exceeds

the profit must *exceed* \$1000

$$P > 1000$$

$\geq$

greater than or equal to

Bob's test scores are always *greater than or equal to* 90

$$S \geq 90$$

at least

my car's mileage is *at least* 30 mpg

$$M \geq 30$$

minimum

the *minimum* weight to qualify is 132 lb

$$W \geq 132$$

not less than

the price is *not less than* \$25

$$P \geq 25$$

$\leq$

less than or equal to

x is *less than or equal to* y

$$x \leq y$$

at most

the distance of the rides is *at most* 40 mi.

$$D \leq 40$$

maximum

the *maximum* number of units is 400

$$N \leq 400$$

not more/higher than

test scores were *not higher than* 83

$$S \leq 83$$

does not exceed

the cost of a phone call *does not exceed* \$3.50

$$C \leq 3.50$$

the greatest number

*the greatest number* of hours allowable is 60

$$H \leq 60$$