

# Translating Words into Expressions & Equations

Prerequisite Skills Needed:

- Basic Addition & Subtraction Skills

# Translating Words into Expressions & Equations

We've discussed the difference between Expressions & Equations:

Expression

$$7 + 3$$

the sum of seven and three

Equation

$$7 + 3 = 10$$

The sum of seven and three is ten.

# Translating Words into Expressions & Equations

We've discussed the difference between Expressions & Equations:

Expression

$$7 + 3$$

$$5 + x$$

the sum of seven and three

the sum of five and x

Equation

$$7 + 3 = 10$$

$$5 + x = 12$$

The sum of seven and three is ten.

The sum of five and x is twelve.

# Translating Words into Expressions & Equations

We've discussed the difference between **Expressions** & **Equations**:

Expression

$$7 + 3$$

$$5 + x$$

The sum of seven and three

The sum of five and  $x$

Equation

$$7 + 3 = 10$$

$$5 + x = 12$$

The sum of seven and three is ten.

The sum of five and a number is twelve.

In this lesson, we'll focus on translating English words into mathematical symbols  
&  
how to create expressions and equations from words.

# Translating Words into Expressions & Equations

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$$7 + 3$$

$$5 + x$$

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Equation

$$7 + 3 = 10$$

$$5 + x = 12$$

The sum of seven and three is ten.

The sum of five and x is twelve.

In this lesson, we'll focus on translating English words into mathematical symbols  
&  
how to create expressions and equations from words.

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

the sum of seven and three

Word	Symbol
sum	

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

the <sup>+</sup>sum of <sup>7</sup>seven and <sup>3</sup>three

Word	Symbol
sum	+

# Translating Words into Expressions & Equations

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the <sup>+</sup>sum of <sup>7</sup>seven and <sup>3</sup>three

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Word	Symbol
sum	+



# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

the sum of seven and three

$$7 + 3$$

Word	Symbol
sum	+
Unknown quantity	

the sum of five and an  
unknown quantity

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

the sum of seven and three

$$7 + 3$$

the sum of five and an unknown quantity

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

the sum of seven and three

$$7 + 3$$

the sum of five and an unknown quantity

$$5 + x$$

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

The sum of seven and three is ten.

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter
is	

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

The  $+$  sum of  $7$  seven and  $3$  three is  $=$   $10$  ten.

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter
is	=

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

The <sup>+</sup>sum of <sup>7</sup>seven and <sup>3</sup>three is <sup>10</sup>ten.

$$7 + 3 = 10$$

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter
is	=

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

The sum of seven and three is ten.

$$7 + 3 = 10$$

The sum of five and an unknown quantity equals twelve.

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter
is	=
equals	

# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

The sum of seven and three is ten.

$$7 + 3 = 10$$

The sum of five and an unknown quantity equals twelve.

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter
is	=
equals	=



# Translating Words into Expressions & Equations

To translate, look for words that represent mathematical symbols:

The sum of seven and three is ten.

$$7 + 3 = 10$$

The sum of five and an unknown quantity equals twelve.

$$5 + x = 12$$

Word	Symbol
sum	+
Unknown quantity	x, n, or another letter
is	=
equals	=







# Translating Words into Expressions & Equations

twice a number  $2 \cdot n = 2n$

the quotient of three and ten

Word	Symbol
twice	$\cdot 2$ (times 2)
a number	$x, n,$ or another letter
quotient	$\div$

# Translating Words into Expressions & Equations

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# Translating Words into Expressions & Equations

twice a number  $2 \cdot n = 2n$

the quotient of three and ten

$$3 \div 10 = \frac{3}{10}$$

Word	Symbol
twice	$\cdot 2$ (times 2)
a number	$x, n,$ or another letter
quotient	$\div$

# Translating Words into Expressions & Equations

twice a number  $2 \cdot n = 2n$

the quotient of three and ten  $3 \div 10 = \frac{3}{10}$

nine plus five times an unknown quantity

Word	Symbol
twice	$\cdot 2$ (times 2)
a number	$x, n,$ or another letter
quotient	$\div$
plus	$+$
times	$\cdot$ (multiply)
unknown quantity	$x, n,$ or another letter



# Translating Words into Expressions & Equations

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$$3 \div 10 = \frac{3}{10}$$

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# Translating Words into Expressions & Equations

twice a number  $2 \cdot n = 2n$

the quotient of three and ten  $3 \div 10 = \frac{3}{10}$

nine plus five times an unknown quantity  $9 + 5 \cdot y = 9 + 5y$

Word	Symbol
twice	$\cdot 2$ (times 2)
a number	$x, n,$ or another letter
quotient	$\div$
plus	$+$
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unknown quantity	$x, n,$ or another letter

# Translating Words into Expressions & Equations

twice a number  $2 \cdot n = 2n$

the quotient of three and ten  $3 \div 10 = \frac{3}{10}$

nine plus five times an unknown quantity  $9 + 5 \cdot y = 9 + 5y$

four more than the quotient of eight and a number

Word	Symbol
twice	$\cdot 2$ (times 2)
a number	$x, n,$ or another letter
quotient	$\div$
plus	$+$
times	$\cdot$ (multiply)
unknown quantity	$x, n,$ or another letter
more than	$+$

# Translating Words into Expressions & Equations

twice a number  $2 \cdot n = 2n$

the quotient of three and ten  $3 \div 10 = \frac{3}{10}$

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four more than the quotient of eight and a number

Word	Symbol
twice	$\cdot 2$ (times 2)
a number	$x, n,$ or another letter
quotient	$\div$
plus	$+$
times	$\cdot$ (multiply)
unknown quantity	$x, n,$ or another letter
more than	$+$

# Translating Words into Expressions & Equations

twice a number  $2 \cdot n = 2n$

the quotient of three and ten  $3 \div 10 = \frac{3}{10}$

nine plus five times an unknown quantity  $9 + 5 \cdot y = 9 + 5y$

four more than the quotient of eight and a number  $8 \div n + 4 = \frac{8}{n} + 4$

Word	Symbol
twice	$\cdot 2$ (times 2)
a number	$x, n,$ or another letter
quotient	$\div$
plus	$+$
times	$\cdot$ (multiply)
unknown quantity	$x, n,$ or another letter
more than	$+$

# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

six less than a number

Word	Symbol
less than	- (number goes at end)

# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

<sup>6</sup> six <sup>-</sup> less <sup>n</sup> than a number

Word	Symbol
less than	- (number goes at end)

# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

<sup>6</sup> six <sup>-</sup> less <sup>n</sup> than a number

$$n - 6$$

Word	Symbol
less than	- (number goes at end)



# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

six <sup>6</sup> less <sup>-</sup> than <sup>n</sup> a number  $n - 6$

six decreased by a number

Word	Symbol
less than	- (number goes at end)
decreased by	- (order is the same)

# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

six <sup>6</sup> less <sup>-</sup> than <sup>n</sup> a number  $n - 6$

six <sup>6</sup> decreased <sup>-</sup> by <sup>n</sup> a number

Word	Symbol
less than	- (number goes at end)
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# Translating Words into Expressions & Equations

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six <sup>6</sup> less <sup>-</sup> than <sup>n</sup> a number  $n - 6$

six <sup>6</sup> decreased <sup>-</sup> by <sup>n</sup> a number  $6 - n$

Word	Symbol
less than	- (number goes at end)
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# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

six <sup>6</sup> less <sup>-</sup> than <sup>n</sup> a number  $n - 6$

six <sup>6</sup> decreased <sup>-</sup> by <sup>n</sup> a number  $6 - n$

six more than a number

Word	Symbol
less than	- (number goes at end)
decreased by	- (order is the same)
more than	+ (number goes at end)

# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

<sup>6</sup> six <sup>-</sup> less than <sup>n</sup> a number  $n - 6$

<sup>6</sup> six <sup>-</sup> decreased by a <sup>n</sup> number  $6 - n$

<sup>6</sup> six <sup>+</sup> more than <sup>n</sup> a number

Word	Symbol
less than	- (number goes at end)
decreased by	- (order is the same)
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# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

<sup>6</sup> six <sup>-</sup> less than <sup>n</sup> a number  $n - 6$

<sup>6</sup> six <sup>-</sup> decreased by a <sup>n</sup> number  $6 - n$

<sup>6</sup> six <sup>+</sup> more than <sup>n</sup> a number  $n + 6$

Word	Symbol
less than	- (number goes at end)
decreased by	- (order is the same)
more than	+ (number goes at end)

# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

<sup>6</sup>six <sup>-</sup>less than <sup>n</sup>a number  $n - 6$

<sup>6</sup>six <sup>-</sup>decreased by <sup>n</sup>a number  $6 - n$

<sup>6</sup>six <sup>+</sup>more than <sup>n</sup>a number  $n + 6$

six increased by a number

Word	Symbol
less than	- (number goes at end)
decreased by	- (order is the same)
more than	+ (number goes at end)
increased by	- (order is the same)

# Translating Words into Expressions & Equations

Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

<sup>6</sup> six <sup>-</sup> less than <sup>n</sup> a number  $n - 6$

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<sup>6</sup> six <sup>+</sup> increased by a <sup>n</sup> number

Word	Symbol
less than	- (number goes at end)
decreased by	- (order is the same)
more than	+ (number goes at end)
increased by	+ (order is the same)



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Watch for **MORE THAN** and **LESS THAN** - these can be tricky!

<sup>6</sup> six <sup>-</sup> less than <sup>n</sup> a number  $n - 6$

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<sup>6</sup> six <sup>+</sup> more than <sup>n</sup> a number  $n + 6$

<sup>6</sup> six <sup>+</sup> increased by a <sup>n</sup> number  $6 + n$

Word	Symbol
less than	- (number goes at end)
decreased by	- (order is the same)
more than	+ (number goes at end)
increased by	+ (order is the same)

