

M8 - 10.8 - Expressions: Single WS

Write the expression

Three plus six

$$3 + 6$$

3 added to a number

$$x + 3$$

9 more than a number

Four more than x

The sum of two numbers

Five added to four

The sum of 8 and a number

A number increased by 5

k plus five

The sum of three numbers

Four increased by two

A number added to five

Seven plus a number

The sum of x and y

A number more than 2

Write the expression

3 less than 8

$$8 - 3$$

7 less than a number

$$x - 7$$

A number decreased by four.

The difference of nine and five.

$$9 - 5$$

9 subtracted from a number

Three taken away from a number

Ten minus two

The difference of a number and five

x minus twelve

Write the expression

2 less than 6

$$6 - 2$$

A number less than five.

$$5 - x$$

w less than 9.

Three taken away from five

The difference of eight and a number

b subtracted from 4

Eight decreased by one

A number taken away from four.

The difference of x and y

Write the expression

Two times four

$$2 \times 4$$

3 multiplied by a number

$$3 \times n = 3n$$

A number times 8

Negative three multiplied by six

2 times a negative number

The product of a number and 6

The product of four and five

The product of a number and 4

Double a number

Write the expression

Six divided by three

$$6 \div 3 \text{ or } \frac{6}{3}$$

A number divided by 3

A quarter of a number.

Half of four

Half of a number.

The quotient of a number and six.

Ten split into five parts

A number split into three parts

Write the expression

Three divided by a number.

$$3 \div n \text{ or } \frac{3}{n}$$

Four split into a number of parts.

The quotient of four and a number

M8 - 10.8 - Phrases: Single WS

Write the phrase in two different ways. Answers may vary

$2 + 4$	<u>Two plus four</u>	<u>The sum of four and two</u>
$k + 7$	<u></u>	<u></u>
$a + b$	<u></u>	<u></u>
$m + n + k$	<u></u>	<u></u>
$8 + x$	<u></u>	<u></u>
$x + x$	<u></u>	<u></u>

Write the phrase in two different ways. Answers may vary

$5 - 3$	<u></u>	<u></u>
$x - 7$	<u></u>	<u></u>
$x - y$	<u></u>	<u></u>
$x - x$	<u></u>	<u></u>
$5 - x$	<u></u>	<u></u>

Write the phrase in two different ways. Answers may vary

2×5	<u></u>	<u></u>
$3(4)$	<u></u>	<u></u>
$2x$	<u></u>	<u></u>
$x \times 6$	<u></u>	<u></u>
$x \times y$	<u></u>	<u></u>
$(a)(a)$	<u></u>	<u></u>

Write the phrase in two different ways. Answers may vary

$\frac{2}{3}$	<u></u>	<u></u>
$\frac{x}{2}$	<u></u>	<u></u>
$\frac{x}{5}$	<u></u>	<u></u>
$\frac{4}{x}$	<u></u>	<u></u>
$\frac{x}{y}$	<u></u>	<u></u>

M8 - 10.8 - Expressions: Combos WS

Write the expression

Twice a number plus four

A number plus 3, all times 2

Five subtracted from three times a number

8 less than a number, all multiplied by 2

Four more than half a number

Three more than a number, all over five

Twice a number divided by three

Two added to three times a quarter of a number

Six plus three times a number, all over two

Three over two more than a number.

Two over one less than a number

A number less than two times that number.

Four less than two times a number, all over three

Three divided by twice a number.

Five less than a number, all over three, multiplied by two

Three halves plus half a number.

Four times a number added to a different number.

A number less than five divided by three

Half a number added to a quarter of that number.

Two quarters of a number less than three quarters of a different number.

Two less than three times a number, all multiplied by five thirds.

Eight times a number, divided by three then subtracted by five

M8 - 10.8 - Expressions: Combos SOL

Write the expression

Twice a number plus four

$$2x + 4$$

Five subtracted from three times a number

$$3x - 5$$

Four more than half a number

$$\frac{x}{2} + 4$$

Twice a number divided by three

$$\frac{2x}{3}$$

Six plus three times a number, all over two

$$\frac{3x + 6}{2}$$

Two over one less than a number

$$\frac{2}{x - 1}$$

Four less than two times a number, all over three

$$\frac{x - 4}{3}$$

Five less than a number, all over three, multiplied by two

$$2\left(\frac{x - 5}{3}\right)$$

Four times a number added to a different number.

$$4x + y$$

Half a number added to a quarter of that number.

$$\frac{x}{2} + \frac{x}{4}$$

Two quarters of a number less than three quarters of a different number.

$$\frac{3}{4}y - \frac{2}{4}x$$

Two less than three times a number, all multiplied by five thirds.

$$\frac{5}{3}(3x - 2)$$

Eight times a number, divided by three then subtracted by five

$$\frac{8x}{3} - 5$$

A number plus 3, all times 2

$$2(x + 3)$$

8 less than a number, all multiplied by 2

$$2(x - 8)$$

Three more than a number, all over five

$$\frac{x + 3}{5}$$

Two added to three times a quarter of a number

$$\frac{3x}{4} + 2$$

Three over two more than a number.

$$\frac{3}{x + 2}$$

A number less than two times that number.

$$2x - x$$

Three divided by twice a number.

$$\frac{3}{2x}$$

Three halves plus half a number.

$$\frac{3}{2} + \frac{x}{2}$$

A number less than five divided by three

$$\frac{5}{3} - x$$

M8 - 10.8 - Phrases: Combo WS

Write the phrase in two different ways. Answers may vary

$2x + 3$	<u>Three more than twice a number</u>	<u>Two times a number plus three</u>
$3(x + 2)$	<u></u>	<u></u>
$5x - 2$	<u></u>	<u></u>
$4(x - 1)$	<u></u>	<u></u>
$\frac{x}{4} + 3$	<u></u>	<u></u>
$\frac{(x + 3)}{2}$	<u></u>	<u></u>

Write the phrase in two different ways. Answers may vary

$\frac{3x}{2}$	<u></u>	<u></u>
$\frac{5}{6}x + 1$	<u></u>	<u></u>
$\frac{2x + 3}{4}$	<u></u>	<u></u>
$\frac{x - 2}{2}$	<u></u>	<u></u>
$\frac{2x + 2}{5}$	<u></u>	<u></u>

Write the phrase in two different ways. Answers may vary

$3x - x$	<u></u>	<u></u>
$\frac{2x - 1}{6}$	<u></u>	<u></u>
$2\left(\frac{x + 1}{7}\right)$	<u></u>	<u></u>
$\frac{5}{3}x + \frac{x}{2}$	<u></u>	<u></u>
$\frac{3}{5} + 2x$	<u></u>	<u></u>
$\frac{x}{3} + \frac{x}{5}$	<u></u>	<u></u>

Write the phrase in two different ways. Answers may vary

$\frac{5}{6}y + x$	<u></u>	<u></u>
$\frac{6}{4}\left(\frac{2}{x} - 1\right)$	<u></u>	<u></u>
$\left(\frac{9x}{4} + 2\right)$	<u></u>	<u></u>
$\frac{3x}{2} - \frac{5x}{9}$	<u></u>	<u></u>
$\frac{3}{2} \times \frac{4}{5} - x$	<u></u>	<u></u>

M8 - 10.8 - Phrases: Combo SOL

Write the phrase in two different ways. Answers may vary

$2x + 3$	<u>Three more than twice a number</u>
$3(x + 2)$	<u>A number plus two, all times three</u>
$5x - 2$	<u>Two less than five times a number</u>
$4(x - 1)$	<u>A number decreased by one, all multiplied by four</u>
$\frac{x}{4} + 3$	<u>Three more than a number divided by four</u>
$\frac{(x + 3)}{2}$	<u>The quotient of three more than a number and two.</u>

<u>Two times a number plus three</u>
<u>Three times a number that is added to two</u>
<u>A number multiplied by five, minus two</u>
<u>Four times one less than a number</u>
<u>A number divided by four plus three</u>
<u>A number plus three, all divided by two</u>

Write the phrase in two different ways. Answers may vary

$\frac{3x}{2}$	<u>Three times a number over two</u>
$\frac{5}{6}x + 1$	<u>One more than five sixths of a number</u>
$\frac{2x + 3}{4}$	<u>Three more than two times a number, all over four</u>
$\frac{5}{x - 2}$	<u>Five over a number minus two</u>
$\frac{2}{2x + 2}$	<u>Two over two more than twice a number</u>

<u>Three halves of a number</u>
<u>Five times a number, all divided by six, plus one</u>
<u>The quotient of three more than twice a number and four</u>
<u>Five split into two less than a number parts</u>
<u>Twice a number plus two, all under two</u>

Write the phrase in two different ways. Answers may vary

$3x - x$	<u>A number less than three times that number</u>
$\frac{2x - 1}{6}$	<u>One less than twice a number, all over 6</u>
$2\left(\frac{x + 1}{7}\right)$	<u>One more than a number all over seven, multiplied by two</u>
$\frac{5}{3} + \frac{x}{2}$	<u>Five thirds plus half a number</u>
$\frac{3}{5} + 2x$	<u>Three over five plus twice a number</u>
$\frac{x}{3} + \frac{x}{5}$	<u>A third of a number plus a fifth of that number</u>

<u>Three times a number minus that number</u>
<u>The quotient of twice a number minus one and six</u>
<u>Two multiplied by one more than a number over seven</u>
<u>Five over three added to a number over two</u>
<u>Three fifths more than twice a number</u>
<u>A third of a number more than that number divided by five</u>

Write the phrase in two different ways. Answers may vary

$\frac{5}{6}y + x$	<u>Five sixths of a number plus another number</u>
$\frac{6}{4}\left(\frac{2}{x} - 1\right)$	<u>One less than two over a number, all times six fourths</u>
$\left(\frac{9x}{4} + 2\right)$	<u>Nine fourths of a number plus two</u>
$\frac{3x}{2} - \frac{5x}{9}$	<u>Three halves of a number minus 5 ninths of that number</u>
$\frac{3}{2} \times \frac{4}{5} - x$	<u>A number less than three halves times four fifths</u>

<u>A number more than five divided by six times another number</u>
<u>Two over a number minus one, all multiplied by six and divided by four</u>
<u>Two more than nine times a number over four</u>
<u>Five over nine times a number less than three over two times a number</u>
<u>Three times four, all over two times five, minus a number</u>

M8 - 10.8 - Equations: Add and Subtract WS

Write the equation

8 added to a number is 12

$$x + 8 = 12$$

8 added to a number is 10

3 added to a number is 7

2 added to a number is 5

9 added to a number is 10

1 added to a number is 5

1 added to a number is 3

5 added to a number is 7

Write the equation

7 less than a number is 5

$$x - 7 = 5$$

9 less than a number is 8

5 less than a number is 2

2 less than a number is 1

8 less than a number is 4

4 less than a number is 2

11 less than a number is 7

12 less than a number is 8

M8 - 10.8 - Equations: Multiply and Divide WS

Write the equation

2 times a number is 12

$$2x = 12$$

3 times a number is 18

2 times a number is 4

4 times a number is 16

3 times a number is 15

4 times a number is 12

1 times a number is 3

4 times a number is 4

Write the equation

A number divided by 3 is 2

$$\frac{x}{3} = 2$$

A number divided by 1 is 1

A number divided by 2 is 3

A number divided by 2 is 1

A number divided by 7 is 4

A number divided by 3 is 4

A number divided by 8 is 4

A number divided by 4 is 2

M8 - 10.8 - Expressions & Equations Review

Write an expression for the following.

Three more than a number.

Four less than a number.

Four more than twice a number.

Six less than twice a number.

A number divided by 8.

A number multiplied by 2, then subtracted by 8.

Write an equation for the following.

Two times a number is 10.

Three more than a number is 7.

Three more than half a number is 5.

A number is 18 less than 30.

Seven subtracted by a number is 3.

Twice an amount is 50.

A number added to itself is 12.

Four times a number is that number.

A number subtracted by 4, all multiplied by 3.

Ten subtracted by 4, all multiplied by a number is 36.

Write an equation for the following.

A number is four times more than another number. The sum of those two number is 15.

Write an equation for the following using a now and then chart.

A number is three times larger than another number. If both numbers are increased by 5, the larger number is only twice as big.

A number is four times bigger than another number. If both numbers are added by 10, the sum of those numbers is 50.

A number is 3 less than another number. If both numbers are subtracted by 5, the first number will be half of the second number.

M8 - 10.9 - Solving Equations: Add and Subtract WS

Solve the equation.

9 added to a number is 10. What is the number?

$$\begin{array}{r} \cancel{9} + x = 10 \\ -\cancel{9} \quad -9 \\ x = 1 \end{array}$$

8 added to a number is 14. What is the number?

8 added to a number is 11. What is the number?

5 added to a number is 7. What is the number?

7 added to a number is 9. What is the number?

2 added to a number is 6. What is the number?

8 added to a number is 10. What is the number?

9 added to a number is 14. What is the number?

Solve the equation.

5 less than a number is 9. What is the number?

$$\begin{array}{r} x - \cancel{5} = 9 \\ +\cancel{5} \quad +5 \\ x = 14 \end{array}$$

7 less than a number is 7. What is the number?

4 less than a number is 5. What is the number?

6 less than a number is 6. What is the number?

4 less than a number is 2. What is the number?

4 less than a number is 4. What is the number?

7 less than a number is 5. What is the number?

6 less than a number is 1. What is the number?

M8 - 10.9 - Solving: Multiply and Divide WS

Solve the equation.

4 times a number is 28. What is the number?

$$4x = 28$$

$$\frac{4x}{4} = \frac{28}{4}$$

$$x = 7$$

2 times a number is 4. What is the number?

2 times a number is 12. What is the number?

4 times a number is 20. What is the number?

3 times a number is 6. What is the number?

1 times a number is 8. What is the number?

1 times a number is 7. What is the number?

2 times a number is 8. What is the number?

Solve the equation.

A number divided by 1 is 2. What is the number?

$$\frac{x}{1} = 2$$

$$\frac{x}{1} = 2 \times 1$$

$$x = 2$$

A number divided by 4 is 7. What is the number?

A number divided by 4 is 6. What is the number?

A number divided by 8 is 7. What is the number?

A number divided by 5 is 9. What is the number?

A number divided by 8 is 6. What is the number?

A number divided by 8 is 6. What is the number?

A number divided by 5 is 4. What is the number?

M8 - 10.9 - Solving Combo Equations WS

Solve for the number.

Five more than a number is 12. What is the number?

$$\begin{array}{r} x + 5 = 12 \\ -5 \quad -5 \\ \hline x = 7 \end{array}$$

Four times a number is 12. What is the number?

Three less than a number is 10. What is the number?

Two more than twice a number is 10. What is the number?

Three less than twice a number is 15. What is the number?

Six plus half of three times a number is 12. What is the number?

A number less than 10 is 4. What is the number?

M8 - 10.9 - Solving Equations of Numbers w/ Sums WS

The second of two numbers is 5 times the first number. Their sum is 60. Find the numbers.

$$\begin{array}{rcl} x + 5x & = & 60 \\ 6x & = & 60 \\ \frac{6x}{6} & = & \frac{60}{6} \\ x & = & 10 \end{array}$$

The sum of two numbers is 20. The first number is 4 less than 3 times the second number. Find the numbers.

One number is five times larger than the other. They sum to 18. Find the numbers.

The second of two numbers is four less than twice the first number. Their sum is 26. What are the numbers?

The sum of two numbers is 42. The first number is two more than three times larger the second number. Find the numbers.

The sum of three numbers is 77. The second number is seven times the first, while the third is four less than the first. Find the numbers.

The sum of three numbers is 21. The second number is one less than two times the first number, and the third number is two less than three times the first number. Find the numbers.

The first of two movies lasted 8 minutes less than twice as long as the second movie. Together, the movies lasted 112 minutes. Find out how long the two movies each last.

M8 - 10.9 - Solving Equations of Real World WP

A 72 meter length of rope is cut so that one piece is 20 meters longer than the other. How long are the two pieces?

$$\begin{array}{rcl} x + (x + 20) & = & 72 \\ 2x + 20 & = & 72 \\ -20 & -20 & \\ 2x & = & 50 \\ \frac{2x}{2} & = & \frac{50}{2} \\ x & = & 25 \end{array}$$

A bottle filled with a liquid weighs 12 pounds. If the liquid weighs three times more than the bottle, what is the weight of the bottle?

Rob is 10 pounds less than twice the weight of Jane. Together, they weigh 80 pounds. How much do they each weigh?

A shirt, cardigan and pants cost a total of 150 dollars. The pants cost twice the shirt, and the cardigan is 50 dollars more than the pants. How much does each item of clothing cost?

The sum of the angles of a triangle is 180° . The second angle is 10° less than twice the first, and the third angle measures 25° more than the second. What are the angles?

M8 - 10.9 - Consecutive Statements WP

The sum of two consecutive even numbers is 10. What are the numbers?

The sum of two consecutive even numbers is 18. What are the numbers?

The sum of two consecutive odd numbers is 24. What are the numbers?

The sum of two consecutive odd numbers is 16. What are the numbers?

There are two consecutive numbers. If we double both the numbers, their sum is 18. What are the numbers?

If we double two consecutive odd numbers, their sum is 16. What are the numbers?

We have two consecutive even numbers. If we multiply the smaller one by four and the other by three, their sum is 48. What are the numbers?

Find three consecutive integers such that they all sum to 27.

Find three consecutive integers such that the smallest and largest integers sum to 22.

Find three consecutive even integers such that they sum to 36.

Find three consecutive odd integers such that the smallest and largest sum to 18.

M8 - 10.9 - Equations with 2 Variables WS

Solve for the numbers.

A number is three times more than another number. The sum of those two number is 20. What are the numbers?

Number A is three times larger than number B. If both numbers are added by 5, number A is only twice as big.

Number A is 2 less than number B. If both numbers are subtracted by 4, number A will be half of number B. What are the numbers?

M8 - 10.9 - Age Differences Now, 1 Vars

Mark is 5 years older than Sarah. The sum of their ages is 17. How old are they?

Let x = Sarah's age

Let $x + 5$ = Mark's age

Mark is 7 years older than Will. The sum of their ages is 15. Find their ages.

John is 4 years younger than Jane. The sum of their ages is 18. How old are they?

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Sally is twice as old as Nema, the sum of their ages is 12.

Tim is twice as old as Lisa. The difference of their ages is 15. How old are they?

Sam and Rob have the sum of their ages equalling 40, with Sam being older by 8 years. How old are they?

Merry is five years older than Pippin. The sum of their ages is 13. How old are they?

M8 - 10.9 - Now, 1 Vars WS

Joseph is 1 year older than James . The sum of their ages is 15. How old are they?

Let x = James's age

Let $x + 1$ = Joseph's age

$$x + (x + 1) = 15$$

$$x + 1 = 8$$

$$2x + 1 = 15$$

$$\begin{array}{r} -1 \\ 2x + 1 = 15 \\ \hline 2x = 14 \end{array}$$

$$2x = 14$$

$$\frac{2x}{2} = \frac{14}{2}$$

$$x = 7$$

James is 8 years old.

Ben is 10 years older than Cam. The sum of their ages is 20. How old are they?

Jada is 6 years older than Madison . The sum of their ages is 12. How old are they?

Maya is 12 years older than Ethan . The sum of their ages is 30. How old are they?

Hunter is 2 years older than Tristan . The sum of their ages is 18. How old are they?

M8 - 10.9 - Age Differences Now Combo WS

A girl is three years more than twice the age of her brother. The sum of their ages is 27. How old are they?

Taylor is four years less than twice the age of Charlie. The sum of their ages is 23. How old are they?

Chase is five years more than three times Maria's age. The sum of their ages is 53. How old are they?

Jonathan's grandfather is three years older than eight times Jonathan's age. The sum of their ages is 93. How old are they?

Eva is a year older than half of Alice's age. The sum of their ages is 25. How old are they?

M8 - 10.9 - Word Problems Now Then Chart WS

Isabella is 6 times older than Emma, but in 6 years from now, will only be 4 times as old as Emma. How old is Emma now?

Let x = Emma's age now

Let $6x$ = Isabella's age now

	Now	Then
Isabella	$6x$	$6x + 6$
Emma	x	$x + 6$

$$6x + 6 = 4(x + 6)$$

$$6x + 6 = 4x + 24$$

$$\begin{array}{r} -4x \\ 2x + 6 = 24 \end{array}$$

$$2x + 6 = 24$$

$$\begin{array}{r} -6 \\ 2x = 18 \end{array}$$

$$2x = 18$$

$$\begin{array}{r} 2x \\ \hline 2 \end{array} = \frac{18}{2}$$

$$x = 9$$

Emma is 9 years old now.

Jayden is 9 times older than Sophia, but in 14 years from now, will only be 2 times as old as Sophia. How old is Sophia now?

Ethan is 3 times older than Madison, but in 15 years from now, will only be 2 times as old as Madison. How old is Madison now?

Sarah is 10 times older than Jacob, but in 10 years from now, will only be 5 times as old as Jacob. How old is Jacob now?

M8 - 10.9 - Word Problems Now Then Chart WS

Andrew is 12 times older than Matthew, but in 14 years from now, will only be 5 times as old as Matthew. How old is Matthew now?

Joshua is 8 times older than Kaylee, but in 9 years from now, will only be 5 times as old as Kaylee. How old is Kaylee now?

Ryan is 13 times older than Dylan, but in 9 years from now, will only be 4 times as old as Dylan. How old is Dylan now?

Madeline is 6 times older than Olivia, but in 11 years from now, will only be 5 times as old as Olivia. How old is Olivia now?

M8 - 10.9 - Word Problems Now Then Chart WS

Connor is 8 times older than Abigail, but in 14 years from now, will only be 6 times as old as Abigail. How old is Abigail now?

Samantha is 16 times older than Ava, but in 14 years from now, will only be 6 times as old as Ava. How old is Ava now?

Hailey is 7 times older than Jack, but in 14 years from now, will only be 3 times as old as Jack. How old is Jack now?

Logan is 11 times older than Mia, but in 15 years from now, will only be 6 times as old as Mia. How old is Mia now?

M8 - 10.9 - Word Problems 1 Variable (Then) WS

Jack is 38 years old, while William is 10 years old. How many years ago was Jack 5 times older than William?

Scar is 3 times older than Mufasa, but in 10 years he will only be twice as old as Mufasa. How old is Mufasa right now?

M8 - 10.9 - Word Problems 2 Variables WS

Solve the following.

Elsa is three times older than Sven. After 15 years, Elsa will be twice Sven's age. How old are they both?

Dory is four times heavier than Marlin. If Marlin doubles his weight, he will be 20 grams lighter than Dory. How heavy are they both?

Simba is now 3 times as old as his brother. 12 years ago, he was four times as old as his brother. Find how old they currently are.