# Chapter 1. Language of Algebra

## Ex. 1.1

### Answer 1CU.

Algebraic expressions include variables and numbers. Also it contains arithmetic operations. Verbal expressions contain words. Here words are used to represent everything such as variables, numbers, and arithmetic operations in an algebraic expression.

### Answer 1RM8.

1. Nine divided by 2 plus *n* implies the following. Divided by tells division, and plus tells addition. Hence the algebraic expression is $9 \div 2 + n$.

The correct match is $\boxed{\text{c}}$.

2. Four divided by the difference of *n* and six implies difference of *n* and six is a single expression. Also difference tells it is subtraction. Divided by tells division problem. Hence the algebraic expression is $4 \div (n - 6)$.

The correct match is $\boxed{\text{b}}$.

3. *n* plus five squared. Plus tells addition problem. Five squared is 5 to the power of 2. Hence the algebraic expression is $n + 5^2$.

The correct match is $\boxed{\text{f}}$.

4. three times the quantity eight plus *n*. times tells multiplication. Plus tells addition. Quantity indicate parentheses. Hence eight plus *n* is a single expression. Hence the algebraic expression is $3(8 + n)$.

The correct match is $\boxed{\text{h}}$.

5. Nine divided by the quantity 2 plus *n* implies 2 plus *n* is a single expression. This is because quantity indicates parentheses. Divided by tells division problem. Hence the algebraic expression is $9 \div (2+n)$.

The correct match is $\boxed{\text{g}}$.

6. three times eight plus *n*. times tells multiplication. Plus tells addition. Hence the algebraic expression is $3(8)+n$.

The correct match is $\boxed{\text{d}}$.

7. the quantity *n* plus five squared. Plus tells addition problem. Five squared is 5 to the power of 2. *n* plus five squared is a single expression. This is because quantity indicates parentheses. Hence the algebraic expression is $(n+5)^2$.

The correct match is $\boxed{\text{a}}$.

8. Four divided by *n* minus six implies the following. Minus tells it is subtraction. Divided by tells division problem. Hence the algebraic expression is $4 \div n - 6$.

The correct match is $\boxed{\text{e}}$.

**Answer 2CU.**

Given rectangle has length *l* and width *w*. To find the perimeter of this rectangle, 2 times *l*, and 2 times *w*, has to be added. Therefore an expression representing the perimeter of the rectangle is $\boxed{2l+2b}$.

**Answer 3CU.**

An expression like $x^n$ is called a power and is read "*x* to the *n*th power." Here the variable *x* is called the base, and *n* is called the exponent. The exponent indicates the number of times the base is used as a factor.

Example of a variable to the fifth power is as follows. Let the variable be *a*. Hence find *a* to the fifth power. As per the above definition this expression is $a^5$. Therefore an example is $\boxed{a^5}$.

**Answer 4CU.**

The word sum suggests addition.

$$\underbrace{\text{the sum}}_{+}\ \text{of}\ \underbrace{j}_{j}\ \underbrace{\text{and } 13}_{13}$$

The given verbal expression in algebraic expression is $\boxed{j+13}$.

**Answer 5CU.**

The word less than suggests subtraction and the word times suggests multiplication. Let a number be *n*.

$$\underbrace{\text{three times a number } n}_{3n}\ \underbrace{\text{less than}}_{-}\ \underbrace{24}_{24}$$

The given verbal expression in algebraic expression is $\boxed{3n-24}$.

**Answer 6CU.**

An expression like $x^n$ is called a power and is read "*x* to the *n*th power." Here evaluate 9 to the second power.

In the given expression, 9 is the base, and 2 is called the exponent. Here 2 indicates the number of times 9 is used as a factor.

$$9^2 = 9 \cdot 9$$

Multiply to get 81. Therefore given expression after evaluation is $\boxed{81}$.

**Answer 7CU.**

An expression like $x^n$ is called a power and is read "*x* to the *n*th power." Here evaluate 4 to the fourth power.

In the given expression, 4 is the base, and 4 is called the exponent. Here 4 indicates the number of times 4 is used as a factor.

$$4^4 = 4 \cdot 4 \cdot 4 \cdot 4$$

Multiply to get 256. Therefore given expression after evaluation is $\boxed{256}$.

**Answer 8CU.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here in place of $x$, $m$ is the variable and is raised to the fourth power. This expression is read as $m$ to the fourth power.

First the product of 4 and the above expression is combined. Therefore the verbal expression for the algebraic expression is $\boxed{\text{the product of 4 and } m \text{ to the fourth power}}$.

**Answer 9CU.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here in place of $x$, $n$ is the variable and is raised to the third power. This expression is read as $n$ to the third power.

First the product of $\frac{1}{2}$ and the above expression is combined. Therefore the verbal expression for the algebraic expression is $\boxed{\text{the product of } \frac{1}{2} \text{ and } n \text{ to the third power}}$.

**Answer 9RM.**

The expression $5x$ represents five times $x$. Symbol + indicates plus. Hence the given expression in words is $\boxed{\text{five times } x \text{ plus one}}$.

**Answer 10CU.**

Given $p$ represents the cost of the peanuts. Total bill paid is \$20. The amount of change received will be total bill less the cost of the peanuts.

$$\underbrace{\text{total bill}}_{20} \ \underbrace{\text{less}}_{-} \ \underbrace{\text{cost of the peanuts}}_{p}$$

The expression for the amount of change received is $\boxed{20-p}$.

**Answer 10RM.**

Here the quantity $x+1$ is within the parentheses. Hence the word quantity is used to tell as "the quantity $x$ plus one." 5 is multiplied by this quantity. Therefore five times this quantity can be used. Hence the given expression in words is $\boxed{\text{five times the quantity } x \text{ plus one}}$.

**Answer 11PA.**

The word sum suggests addition.

$$\underbrace{\text{the sum}}_{+} \ \text{of} \ \underbrace{35}_{35} \ \text{and} \ \underbrace{z}_{z}$$

The given verbal expression in algebraic expression is $\boxed{35+z}$.

**Answer 11RM.**

Symbol + indicates plus. The expression $7x$ tells us seven times $x$. Hence the algebraic expression in words is $\boxed{\text{three plus seven times } x}$.

**Answer 12PA.**

The word sum suggests addition. Let a number be $n$.

$$\underbrace{\text{the sum}}_{+} \text{ of } \underbrace{\text{a number}}_{n} \text{ and } \underbrace{7}_{7}$$

The given verbal expression in algebraic expression is $\boxed{n+7}$.

**Answer 12RM.**

Parentheses indicate Quantity. Symbol + tells plus. Quantity within the parentheses is three plus $x$. Symbol · implies multiplication. Hence the algebraic expression in words is $\boxed{\text{the quantity three plus } x \text{ multiplied by seven}}$.

**Answer 13PA.**

The word product suggests multiplication.

$$\underbrace{\text{the product}}_{\cdot} \text{ of } \underbrace{16}_{16} \text{ and } \underbrace{p}_{p}$$

The given verbal expression in algebraic expression is $\boxed{16p}$.

**Answer 13RM.**

Parentheses indicate Quantity. Symbol + tells plus. Quantity within the parentheses is six plus $b$. Division symbol implies divided by. Hence the algebraic expression in words is $\boxed{\text{the quantity six plus } b \text{ divided by } y}$.

**Answer 14PA.**

The word product suggests multiplication. Let a number be $n$.

$$\underbrace{\text{the product}}_{\cdot} \text{ of } \underbrace{5}_{5} \text{ and } \underbrace{\text{a number}}_{n}$$

The given verbal expression in algebraic expression is $\boxed{5n}$.

**Answer 14RM.**

Symbol + tells plus. Division symbol implies divided by. Parentheses indicate Quantity. Quantity within the parentheses is $b$ divided by $y$. Hence the algebraic expression in words is $\boxed{\text{six plus the quantity } b \text{ divided by } y}$.

**Answer 15PA.**

The word increased suggests addition. Let a number be $n$. Twice the number $n$ is $2n$.

$$\underbrace{49}_{49}\ \underbrace{\text{increased by}}_{+}\ \underbrace{\text{twice a number}}_{2n}$$

The given verbal expression in algebraic expression is $\boxed{49+2n}$.

**Answer 16PA.**

The word and suggests addition. Three times $d$ is $3d$.

$$\underbrace{18}_{18}\ \underbrace{\text{and}}_{+}\ \underbrace{\text{three times } d}_{3d}$$

The given verbal expression in algebraic expression is $\boxed{18+3d}$.

**Answer 17PA.**

The word the suggests multiplication. Let a number be $n$. Square of $n$ is $n^2$.

$$\underbrace{\text{two-thirds}}_{\frac{2}{3}}\ \underbrace{\text{the}}_{\cdot}\ \underbrace{\text{square of a number}}_{n^2}$$

The given verbal expression in algebraic expression is $\boxed{\frac{2}{3}n^2}$.

**Answer 18PA.**

The word the suggest multiplication. Cube of $n$ is $n^3$.

$$\underbrace{\text{one-half}}_{\frac{1}{2}}\ \underbrace{\text{the}}_{\cdot}\ \underbrace{\text{cube of } n}_{n^3}$$

The given verbal expression in algebraic expression is $\boxed{\frac{1}{2}n^3}$.

**Answer 19PA.**

K has $s$ dollars saved. Also she adds $d$ dollars per week for 12 weeks. This means she saves $12d$ in 12 weeks. The amount of money she will have is obtained by adding $s$ dollars and $12d$ dollars.

$$\underbrace{s}_{s}\ \underbrace{\text{and}}_{+}\ \underbrace{12d}_{12d}$$

The amount of money she will have at the end of 12 weeks is $\boxed{s+12d}$.

**Answer 20PA.**

Multiplying the number $\pi$ by the square of the radius gives the area of the circle. By the word suggests multiplication. The radius of the circle is $r$. Square of $r$ is $r^2$.

$$\underbrace{\text{two number } \pi}_{\pi}\ \underbrace{\text{by the}}_{\cdot}\ \underbrace{\text{square of the radius}}_{r^2}$$

Therefore the expression that represents the area of the circle is $\boxed{\pi r^2}$.

## Answer 21PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 6 to the second power.

In the given expression, 6 is the base, and 2 is called the exponent. Here 2 indicates the number of times 6 is used as a factor.

$$6^2 = 6 \cdot 6$$

Multiply to get 36. The given expression after evaluation is $\boxed{36}$.

## Answer 22PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 8 to the second power.

In the given expression, 8 is the base, and 2 is called the exponent. Here 2 indicates the number of times 8 is used as a factor.

$$8^2 = 8 \cdot 8$$

Multiply to get 64. The given expression after evaluation is $\boxed{64}$.

## Answer 23PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 3 to the fourth power.

In the given expression, 3 is the base, and 4 is called the exponent. Here 4 indicates the number of times 3 is used as a factor.

$$3^4 = 3 \cdot 3 \cdot 3 \cdot 3$$

Multiply to get 81. The given expression after evaluation is $\boxed{81}$.

## Answer 24PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 6 to the third power.

In the given expression, 6 is the base, and 3 is the exponent. Here 3 indicate the number of times 6 is used as a factor.

$$6^3 = 6 \cdot 6 \cdot 6$$

Multiply to get 216. The given expression after evaluation is $\boxed{216}$.

## Answer 25PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 3 to the fifth power.

In the given expression, 3 is the base, and 5 is the exponent. Here 5 indicate the number of times 3 is used as a factor.

$$3^5 = 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$$

Multiply to get 243. The given expression after evaluation is $\boxed{243}$.

**Answer 26PA.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 15 to the third power.

In the given expression, 15 is the base, and 3 is the exponent. Here 3 indicate the number of times 15 is used as a factor.

$$15^3 = 15 \cdot 15 \cdot 15$$

Multiply to get 3,375. The given expression after evaluation is $\boxed{3,375}$.

**Answer 27PA.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 10 to the sixth power.

In the given expression, 10 is the base, and 6 is the exponent. Here 6 indicate the number of times 10 is used as a factor.

$$10^6 = 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$$

Multiply to get 1,000,000. The given expression after evaluation is $\boxed{1,000,000}$.

**Answer 28PA.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here evaluate 100 to the third power.

In the given expression, 100 is the base, and 3 is the exponent. Here 3 indicate the number of times 100 is used as a factor.

$$100^3 = 100 \cdot 100 \cdot 100$$

Multiply to get 1,000,000. The given expression after evaluation is $\boxed{1,000,000}$.

**Answer 29PA.**

Cost of buying $b$ dozen bagels is $8.5b$. Cost of buying $d$ dozen donuts is $3.99d$. To find the cost of buying $b$ dozen bagels and d dozen donuts add both the costs.

Add both the costs as follows.

$b$ dozen bagels and $d$ dozen donuts $= 8.5b + 3.99d$

Expression for the total cost is $\boxed{8.5b + 3.99d}$.

**Answer 30PA.**

S's car had 23,500 miles on the odometer. Also she drives an average of $m$ miles each day for two weeks. This means she drives $14m$ miles in 2 weeks or 14 days. The mileage on S's odometer after her trip is obtained by adding 23,500 miles and $14m$ miles.

$$\underbrace{23,500}_{23,500} \underbrace{\text{and}}_{+} \underbrace{14\text{m}}_{14m}$$

The expression that represents the mileage on S's odometer after her trip is $\boxed{23,500 + 14m}$.

**Answer 31PA.**

The product of 7 and $p$, or 7 times $p$. Therefore the verbal expression for the algebraic expression is $\boxed{\text{the product of 7 and } p}$.

**Answer 32PA.**

The product of 15 and $r$, or 15 times $r$. Therefore the verbal expression for the algebraic expression is $\boxed{\text{the product of 15 and } r}$.

**Answer 33PA.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here in place of $x$, 3 is present and is raised to the third power. This expression is read as 3 to the third power or 3 cubed.

Therefore the verbal expression for the algebraic expression is $\boxed{\text{3 to the third power}}$.

**Answer 34PA.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here in place of $x$, 5 is present and is raised to the fourth power. This expression is read as 5 to the fourth power.

Therefore the verbal expression for the algebraic expression is $\boxed{\text{5 to the fourth power}}$.

**Answer 35PA.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $x$ is raised to the second power or $x$ squared. Then 3 times $x$ squared is added to 4.

Therefore the verbal expression for the algebraic expression is $\boxed{\text{3 times } x \text{ squared plus 4}}$.

## Answer 36PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $n$ is raised to the third power or $x$ cubed. Then 2 times $n$ cubed is added to 12.

Therefore the verbal expression for the algebraic expression is $\boxed{\text{2 times } n \text{ cubed plus 12}}$.

## Answer 37PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $a$ is raised to the fourth power, and $b$ is raised to the second power or $b$ squared. Actually $a$ to the fourth power times $b$ squared is given.

Therefore the verbal expression for the algebraic expression is

$\boxed{a \text{ to the fourth power times } b \text{ squared}}$.

## Answer 38PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $n$ is raised to the third power, and $p$ is raised to the fifth power. Actually $n$ cubed times $p$ to the fifth power is given.

Therefore the verbal expression for the algebraic expression is

$\boxed{n \text{ cubed times } p \text{ to the fifth power}}$.

## Answer 39PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $z$ is raised to the second power. Actually 12 times $z$ squared is in the numerator. The five in the denominator is considered as a fraction $\frac{1}{5}$. This is read as one-fifth.

Therefore the verbal expression for the algebraic expression is $\boxed{\text{one-fifth 12 times } z \text{ squared}}$.

## Answer 40PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $g$ is raised to the third power. Actually 8 times $g$ cubed is in the numerator. The four in the denominator is considered as a fraction $\frac{1}{4}$. This is read as one-fourth.

Therefore the verbal expression for the algebraic expression is $\boxed{\text{one-fourth 8 times } g \text{ cubed}}$.

## Answer 41PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $x$ is raised to the second power. Actually 3 times $x$ squared minus 2 times $x$ is given.

Therefore the verbal expression for the algebraic expression is

$\boxed{3 \text{ times } x \text{ squared minus 2 times } x}$.

## Answer 42PA.

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here $f$ is raised to the fifth power, and $k$ is raised to the third power. Actually 4 times $f$ to the fifth power minus 9 times $k$ cubed.

Therefore the verbal expression for the algebraic expression is

$\boxed{\text{4 times } f \text{ to the fifth power minus 9 times } k \text{ cubed}}$.

## Answer 43PA.

The volume of the ice equals the sum of the volume of the water and the product of one-eleventh and the volume of the water.

Given $x$ cubic centimeters of water is frozen. This means volume of the water is $x$. one-eleventh is written as a fraction $\frac{1}{11}$.

To find an expression for the volume of the ice that is formed, sum of $x$, and the product of $\frac{1}{11}$ and $x$ is found out.

Therefore an expression for the volume of the ice that is formed is $\boxed{x+\frac{1}{11}x}$.

## Answer 44PA.

The surface area of a rectangular prism is given as follows. Let the length be $l$, width be $w$, and height be $h$. This is the sum of the product of twice the length and the width, the product of twice the length and the height, the product of twice the width and the height.

To find an expression that represents the surface area of the given rectangular prism, sum of the product of twice the length and the width, the product of twice the length and the height, the product of twice the width and the height is found out. This is $2lw+2lh+2wh$.

Therefore an expression for the surface area of the given rectangular prism is

$\boxed{2lw+2lh+2wh}$.

## Answer 45PA.

Each person in a state produces approximately 3.5 pounds of trash each day. To find an expression representing the pounds of trash produced in a day by a family that has $m$ members, multiply 3.5 by $m$.

If one person produces 3.5 pounds of trash per day, then 2 persons produce 2 multiplied by 3.5 pounds of trash. Similarly 3 persons means multiply 3 by 3.5. Hence for *m* persons in a family multiply *m* by 3.5.

Therefore the expression $\boxed{3.5m}$ represent the pounds of trash produced in a day by a family that has *m* members.

**Answer 46PA.**

A variable *a* represents a positive whole number. This means *a* is greater than 1. Also to find the value of *a*, have the area and the perimeter as same.

Let the area of the square be $a^2$. Let the perimeter be 4*a*. Given both are same. Now equate both the expressions.

$$a^2 = 4a$$

Divide both the sides by *a*. Division by *a* is possible since *a* is not equal to zero.

Remember *a* is also non negative. Hence the division is as follows.

$$\frac{a^2}{a} = \frac{4a}{a}$$
$$a = 4$$

Therefore the value of *a* is $\boxed{4}$.

**Answer 47PA.**

To find the perimeter of a baseball diamond, use the expression 4*s*.

Two different verbal expressions to describe the perimeter of a square are, 4 times the side of the square *s*, sum of the four sides, a side being *s*.

Perimeter of the square is 4 times the side of the square *s*. this is same as the sum of the four sides, a side being *s*.

$$s + s + s + s$$

**Answer 48PA.**

Certain number is *x*. 2 times *x* is the product of 2 and *x*. This is 2*x*. 6 more than 2 times *x* is $2x + 6$.

The right choice is $\boxed{(\mathrm{D})}$.

**Answer 49PA.**

An expression like $x^n$ is called a power and is read "$x$ to the $n$th power." Here 3 times 4 is used as a factor. The exponent indicates the number of times the base is used as a factor. Exponent is 3 and base is 4.

Expression 4 to the third power or 4 cubed is written. Here 4 times $c$ is used as a factor. The exponent indicates the number of times the base is used as a factor. Exponent is 4 and base is $c$.

Expression $c$ to the fourth power is written along with 4 cubed. Therefore the expression is $4^3c^4$.

The right choice is $\boxed{(B)}$.

**Answer 50MYS.**

Add 1, 4, and 1 to get 6. 6 is the number in the ones digit.

$$\begin{array}{r} 1 \\ 14.3 \\ 01.8 \\ \hline 6.1 \end{array}$$

Add 1, and 0 to get 1. 1 is the number in the tens digit.

$$\begin{array}{r} 1 \\ 14.3 \\ 01.8 \\ \hline 16.1 \end{array}$$

The expression after evaluation is $\boxed{16.1}$.

**Answer 51MYS.**

Subtract 2 from 9 to get 7. 7 is the number in the tenth digit.

$$\begin{array}{r} 09910 \\ \not{1}0.00 \\ \hline 03.24 \\ \hline 76 \end{array}$$

Subtract 3 from 9 to get 6. 6 is the number in the ones digit.

$$\begin{array}{r} 09910 \\ \not{1}0.00 \\ \hline 03.24 \\ \hline 6.76 \end{array}$$

The expression after evaluation is $\boxed{6.76}$.

## Answer 52MYS.

First number has 2 digits after the decimal point and the second number has 1 digit after the decimal point. Now add both the numbers to get 3. Hence the answer number should have 3 digits after the decimal point.

$$\begin{array}{r} 104 \\ 43 \\ \hline 312 \\ 416 \\ \hline 4.472 \end{array}$$

The expression after evaluation is $\boxed{4.472}$.

## Answer 53MYS.

Divide 15.36 by 4.8. To divide these numbers remove the decimal point.

$$1536 \div 48$$

Divide 1536 by 48.

$$\begin{array}{r} 3 \\ 48\overline{)1536} \\ 144 \\ \hline 9 \end{array}$$

Bring down the 6 to get 96.

$$\begin{array}{r} 32 \\ 48\overline{)1536} \\ \underline{144} \\ 96 \\ \underline{96} \\ 0 \end{array}$$

Dividend has 2 digits and divisor has 1 digit. Hence the quotient has 1(2 - 1) digit. The expression after evaluation is $\boxed{3.2}$.

**Answer 54MYS.**

First write 3, and 5 as factors. Here 3 and 5 are already factored completely. Now multiply 3 by 5 to get lowest common multiple of them. This is 15.

Divide 15 by 3 to get 5, and 15 by 5 to get 3. Hence multiply both the numerator and denominator of first number by 5, and the second number by 3 to get common denominator.

Multiply 1, and 3 by 5. Similarly 2 and 5 by 3. Then add the numerator. Retain the common denominator, which is the LCM.

$$\begin{aligned} \frac{1}{3}+\frac{2}{5} &= \frac{1\cdot 5}{3\cdot 5}+\frac{2\cdot 3}{5\cdot 3} \\ &= \frac{5}{15}+\frac{6}{15} \\ &= \frac{11}{15} \end{aligned}$$

The expression after evaluation is $\boxed{\frac{11}{15}}$.

**Answer 55MYS.**

First write 4, and 6 as factors.

$$4 = 2\times 2$$
$$6 = 2\times 3$$

Here 2 is used a maximum of 2 times in any factorization. Also 3 is used 1 time. Hence multiply 2 by 2 by 3 to get 12. This is the lowest common multiple (LCM).

**Answer 56MYS.**

Write all the numbers in a completely factored form. 3 is already factored completely.

$$4 = 2 \times 2$$
$$8 = 2 \times 2 \times 2$$
$$9 = 3 \times 3$$

Write them and cancel the common factors.

$$\begin{aligned}\frac{3}{8} \times \frac{4}{9} &= \frac{3}{2 \times 2 \times 2} \times \frac{2 \times 2}{3 \times 3} \\ &= \frac{1\cancel{3}}{1\cancel{2} \times 2 \times 2} \times \frac{\cancel{2} \times 2}{\cancel{3} \times 3} \\ &= \frac{1}{\cancel{2} \times 2} \times \frac{1\cancel{2}}{3} \\ &= \frac{1}{2} \times \frac{1}{3}\end{aligned}$$

Multiply the remaining numbers in the numerator and denominator.

$$\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$$

The expression after evaluation is $\boxed{\frac{1}{6}}$.

## Answer 57MYS.

Division can be considered as a multiplication after writing the second number which is after the division symbol can be written as its reciprocal.

Write the second number $\frac{3}{5}$ as its reciprocal $\frac{5}{3}$ and carry multiplication.

Write all the numbers in a completely factored form. 3, 5, and 7 are already factored completely.

$$10 = 2 \times 5$$

Write them and cancel the common factors.

$$\frac{7}{10}\times\frac{5}{3}=\frac{7}{2\times5}\times\frac{5}{3}$$
$$=\frac{7}{2\times\cancel{5}}\times\frac{\cancel{5}}{3}$$
$$=\frac{7}{2\times1}\times\frac{1}{3}$$
$$=\frac{7}{2}\times\frac{1}{3}$$

Multiply the remaining numbers in the numerator and denominator.

$$\frac{7}{2}\times\frac{1}{3}=\frac{7}{6}$$

The expression after evaluation is $\boxed{\frac{7}{6}}$.