



Includes Both
Print & Digital
Options

Multiplying Two Decimals

Use the model to multiply 0.4×0.6

Dividing Decimals

When you divide a decimal, you split it into equal groups. You can draw a model to help you divide decimals by a whole number.

$$18 \div 3$$

Multiply Fractions and Whole Numbers

You can use many different strategies to multiply fractions and whole numbers together. Multiplication is the repeated addition of a number. This even includes fractions!

$$\text{Multiply: } 3 \times \frac{2}{3}$$

Strategy 1: Draw a Model



Strategy 2: Repeated Addition

Step 1: Add the Fractions Together

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

Step 2: Simplify if needed

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

Strategy 3: Multiplication

Step 1: Rewrite the whole number as a Fraction and multiply.

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

Step 2: Simplify if needed

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

You can use multiple strategies to double check your work.

Coordinate Plane

There is a system for finding points on any plane (flat surface). A coordinate plane is a set of grids that help you graph data points. There are many key attributes to a coordinate plane.

This is a Coordinate Plane



This data point indicates the ordered pair (-4, 2). This data point indicates the ordered pair (2, 3). This is the x-axis. This is the y-axis.

Prime and Composite Numbers

There are different types of numbers. A prime number only has two factors. A composite number has more than two factors.

Factors - a number of numbers multiplied together to get a product.

Prime Numbers

Prime numbers have only two factors: 1 and itself.

Composite Numbers

Composite numbers have more than two factors.

Volume

Volume measures the space inside a 3-D shape (Rectangular Prism). Volume is measured in cubic units. There are different formulas you can use to find volume.

$$\text{Formula \#1: } V = l \times w \times h$$

Volume = Length \times width \times height
This rectangular prism has the following measurements:
Length = 2 cubic units
Width = 3 cubic units
Height = 4 cubic units
Volume = 24 cubic units

Formula \#2: $V = Bh$

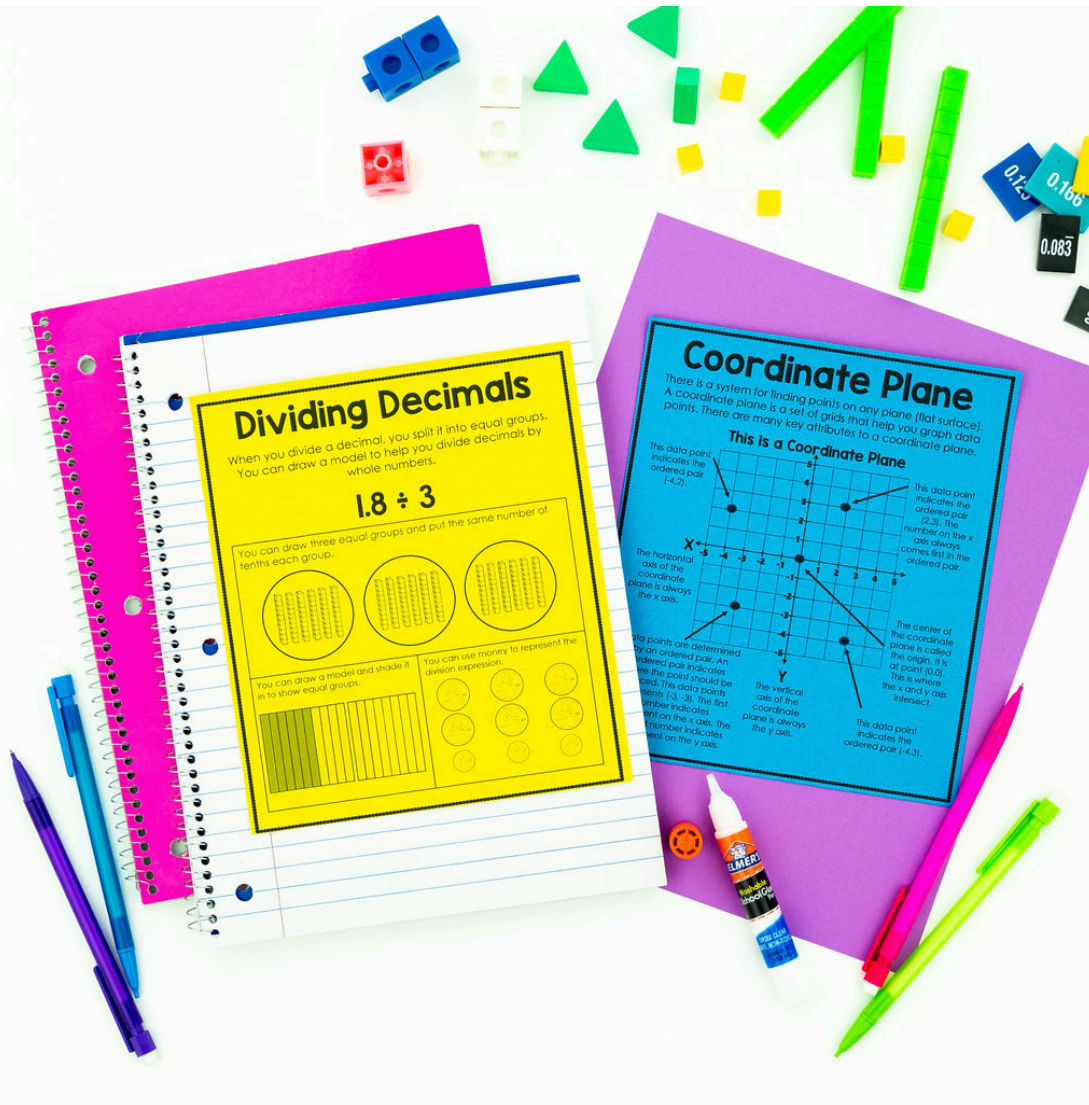
Volume = Area of Base (B) \times height (h)
This rectangular prism has the following measurements:
Area of Base = $5 \times 3 = 15$ cubic units
Height = 4 cubic units
Volume = 60 cubic units

Formula \#3: $V = s \times s \times s$

Volume = side length \times side length \times side length
This rectangular prism has the following measurements:
Side length = 3 cubic units
Side length = 3 cubic units
Side length = 3 cubic units
Volume = 27 cubic units

5th GRADE MATH POSTERS

A great tool for teaching fifth grade math...



- These math posters will help you introduce and teach key math concepts to your fourth-grade students.
- Not only will you save TONS of time not having to create your own anchor charts, but you'll also have clear and concise language and examples you can use when teaching these concepts to your students.
- Students love gluing them in their math journals so they can refer back to them during independent practice or when working at home.

TEACHERS LOVE THIS RESOURCE!

Check out what teachers have to say about this resource.



This was a tool my students enjoy having as part of their interactive math notebook. They can quickly look back while they are completing independent work instead of asking me questions. This tool has made them independent.

–Ebony H.



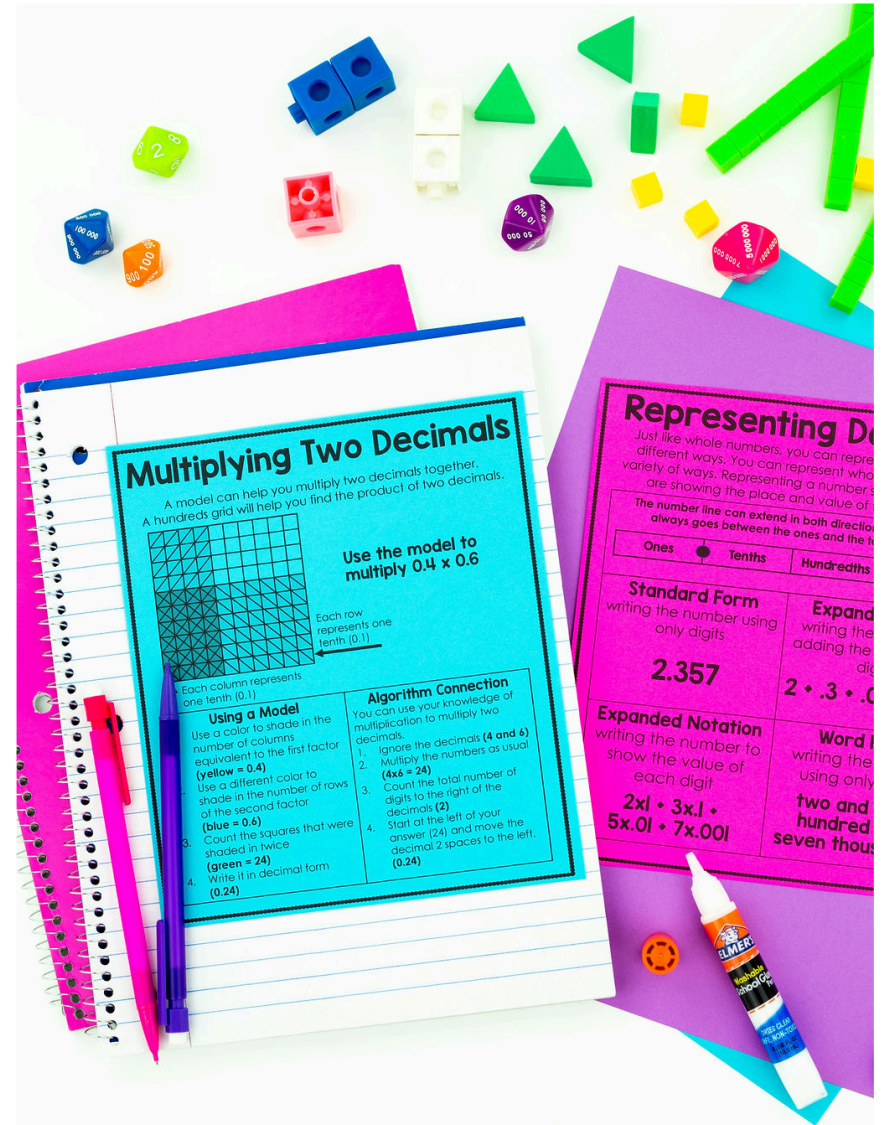
I am teaching a combination class this year, so these math posters have helped me set up my math bulleting board with ease and allows students to check for understanding when needed.

–Lana D.



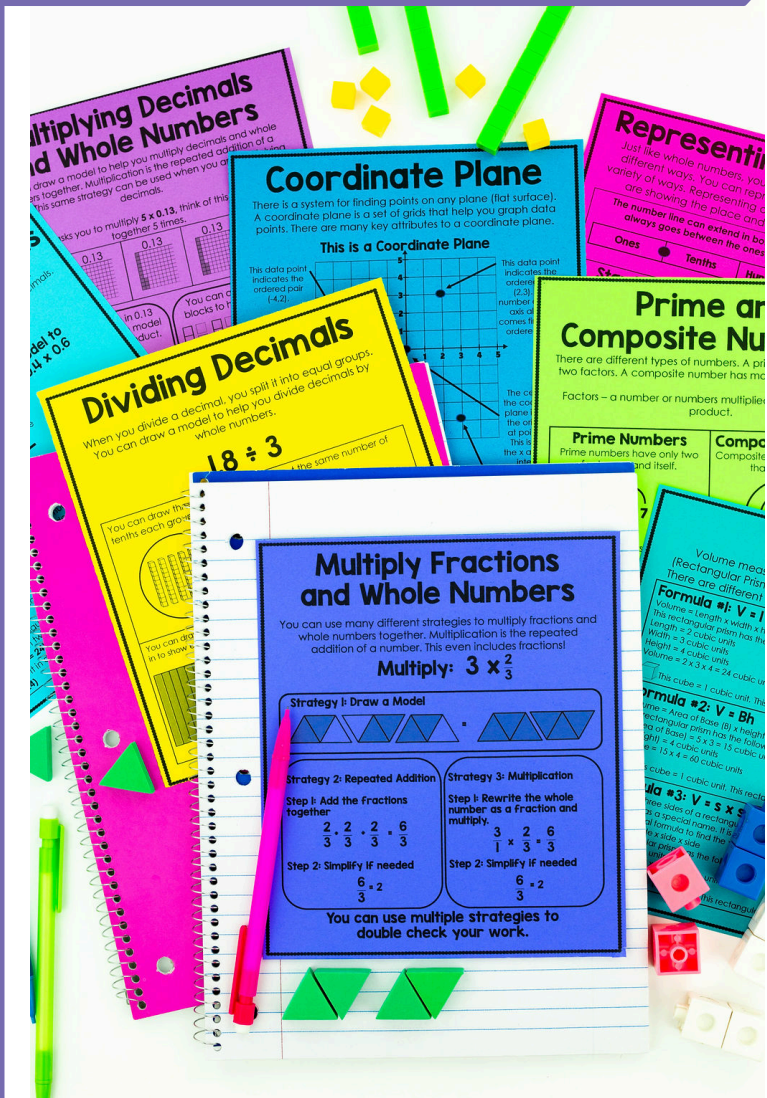
Love the different sizes! They can be used (for anything) from wall posters to notecards on a binder clip for individual review. Nice range of math topics covered.

–Vanessa Shanahan



INCLUDES POSTERS FOR 48 FIFTH GRADE MATH SKILLS

Poster Titles Include:



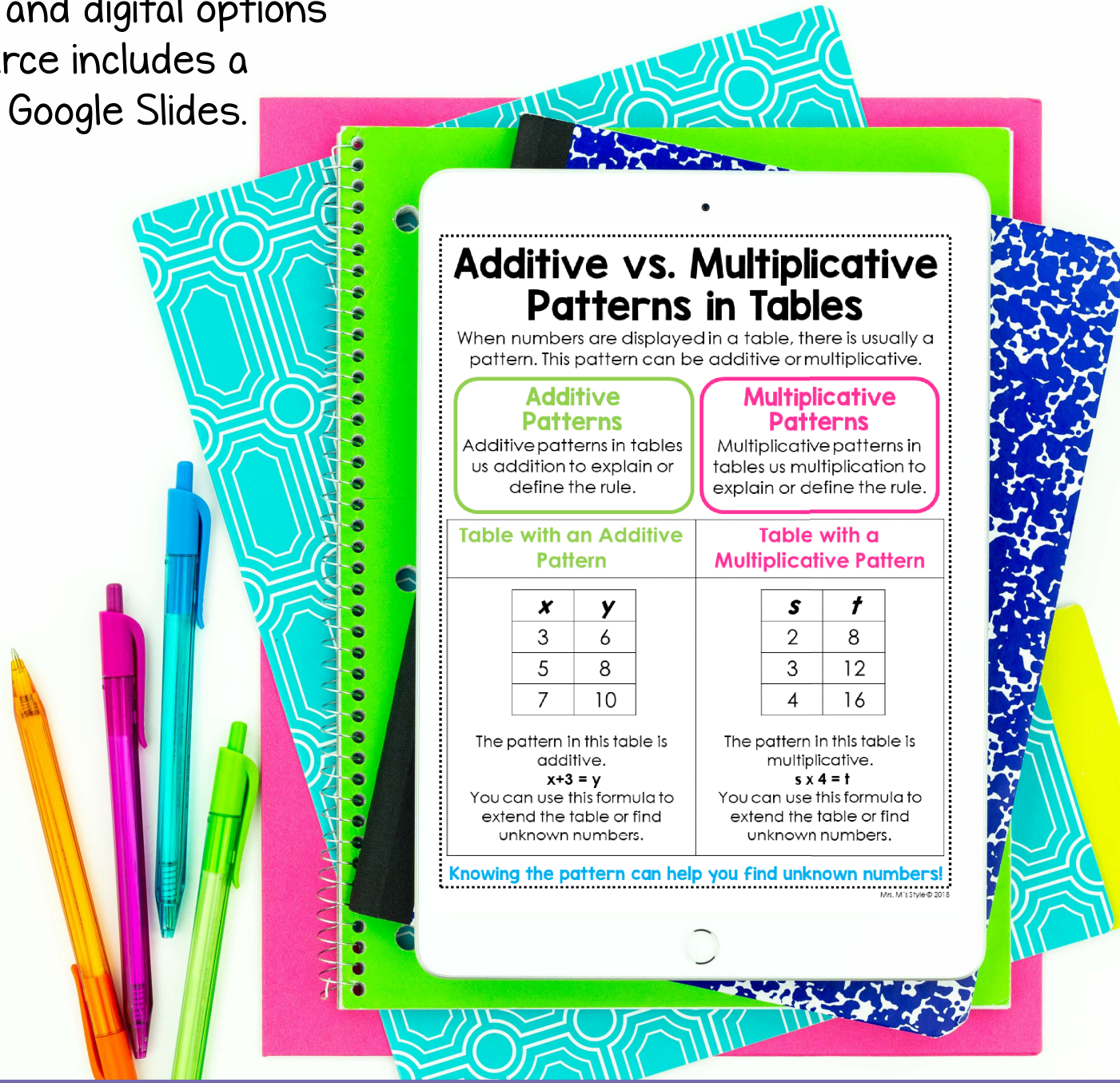
- Representing Decimals
- Compare Decimals
- Rounding Decimals
- Estimating Solutions
- Algorithm for Multiplication
- Long Division With a Digit Divisor
- Multiplying Decimals and Whole Numbers
- Multiplying Money
- Multiplying Two Decimals
- Multiplying Decimals by Powers of 10
- Products of Decimals
- Dividing Decimals (2)
- Place Value Patterns with Decimals
- Add Fractions with Unlike Denominators
- Subtract Fractions with Unlike Denominators
- Multiply Fractions and Whole Numbers
- Properties of Addition
- Properties of Multiplication
- Add and Subtract Mixed Numbers
- Adding and Subtracting Decimals
- Divide Unit Fractions
- Divide Whole Numbers by Unit Fractions
- Prime and Composite Numbers
- Solving for Unknown
- Graphing Numbers
- Additive vs. Multiplicative Patterns in Tables
- Additive vs. Multiplicative Patterns in Graphs
- Simplify Numerical Expressions
- Parentheses and Brackets
- Volume
- Area and Perimeter
- Classify Two-Dimensional Shapes
- Unit Cube
- Rectangular Prisms
- Metric Conversions
- Customary Conversions
- Coordinate Plane
- Ordered Pairs
- Frequency Tables
- Bar Graphs
- Stem and Leaf Plot
- Dot Plot
- Scatterplots
- Taxes
- Income Payments
- Keeping Financial Records

Includes Digital Versions

I love to provide both print and digital options in my resources. This resource includes a digital version created using Google Slides.

Whether you are teaching in person or virtually, you'll be able to use these math posters as part of your whole group instruction.

You can also share them with students to make it easy for them to reference them during their independent practice.



Additive vs. Multiplicative Patterns in Tables

When numbers are displayed in a table, there is usually a pattern. This pattern can be additive or multiplicative.

Additive Patterns

Additive patterns in tables use addition to explain or define the rule.

Multiplicative Patterns

Multiplicative patterns in tables use multiplication to explain or define the rule.

Table with an Additive Pattern

x	y
3	6
5	8
7	10

The pattern in this table is additive.

$$x + 3 = y$$

You can use this formula to extend the table or find unknown numbers.

Table with a Multiplicative Pattern

s	t
2	8
3	12
4	16

The pattern in this table is multiplicative.

$$s \times 4 = t$$

You can use this formula to extend the table or find unknown numbers.

Knowing the pattern can help you find unknown numbers!

Ms. M'slye © 2018

Includes Multiple Printing Options

This resource includes multiple printing options so you can select the exact style that meets your needs.

You can print the posters in color or in black and white.

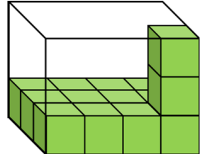


Rectangular Prisms

You can use your knowledge of area to help you find the volume of a rectangular prism.

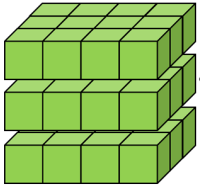
What is the volume of this rectangular prism?

This rectangular prism has a base with an area that is 4×3 or 12 unit cubes.

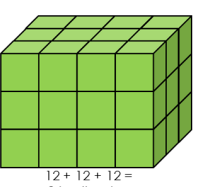


This rectangular prism has a height of 3 units.

When you find the volume, you can think of the base as a layer. The height tells you how many layers there are.



12 unit cubes



12 unit cubes

12 unit cubes

$12 + 12 + 12 = 36$ unit cubes

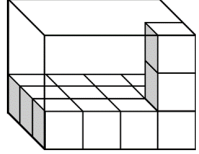
$12 \cdot 12 \cdot 12 = 36$ unit cubes
or $3 \times 12 = 36$ unit cubes

Rectangular Prisms

You can use your knowledge of area to help you find the volume of a rectangular prism.

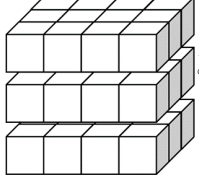
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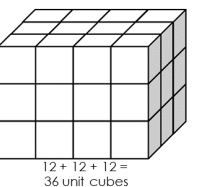


This rectangular prism has a height of 3 units.

When you find the volume, you can think of the base as a layer. The height tells you how many layers there are.



12 unit cubes



12 unit cubes

12 unit cubes

$12 + 12 + 12 = 36$ unit cubes

$12 \cdot 12 \cdot 12 = 36$ unit cubes
or $3 \times 12 = 36$ unit cubes

You can print the posters in mini size, journal size, or full page

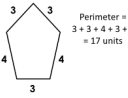


PERIMETER

The perimeter of the shape is the measurement of the distance around the shape. To find the perimeter you need to add the length of ALL the sides.

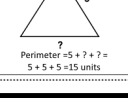
You can find the perimeter of a shape in many ways.

If the measurement of each side is given you can add them up.



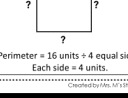
Perimeter = $3 + 3 + 4 + 3 + 4 = 17$ units

If you know a shape is made of equal sides you just need the length of one side to find the perimeter.



Perimeter = $5 + 5 + 5 = 15$ units

If you are given the perimeter, you can work backwards to find the length of each side.



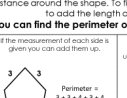
Perimeter = 16 units. 4 equal sides. Each side = 4 units.

PERIMETER

The perimeter of the shape is the measurement of the distance around the shape. To find the perimeter you need to add the length of ALL the sides.

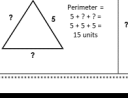
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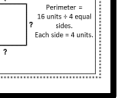
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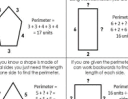
Perimeter = 16 units. 4 equal sides. Each side = 4 units.

PERIMETER

The perimeter of the shape is the measurement of the distance around the shape. To find the perimeter you need to add the length of ALL the sides.

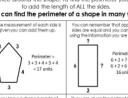
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If the measurement of each side is given you can add them up.



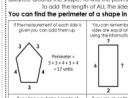
Perimeter = $3 + 3 + 4 + 3 + 4 = 17$ units

If you know a shape is made of equal sides you just need the length of one side to find the perimeter.



Perimeter = $5 + 5 + 5 = 15$ units

If you are given the perimeter, you can work backwards to find the length of each side.



Perimeter = 16 units. 4 equal sides. Each side = 4 units.

A LOOK INSIDE...

Representing Decimals

Just like whole numbers, you can represent decimals in different ways. You can represent whole numbers in a variety of ways. Representing a number simply means you are showing the place and value of that number.

The number line can extend in both directions. The decimal always goes between the ones and the tenths place.

Ones	Tenths	Hundredths	Thousandths
------	--------	------------	-------------

Standard Form
writing the number using only digits

2.357

Expanded Form
writing the number by adding the value of the digits

$2 + .3 + .05 + .007$

Expanded Notation
writing the number to show the value of each digit

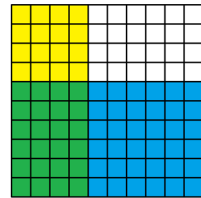
$2 \times 1 + 3 \times .1 + 5 \times .01 + 7 \times .001$

Word Form
writing the number using only words

two and three hundred fifty seven thousandths

Multiplying Two Decimals

A model can help you multiply two decimals together. A hundreds grid will help you find the product of two decimals.



Use the model to multiply 0.4×0.6

Each row represents one tenth (0.1)

Each column represents one tenth (0.1)

Using a Model

- Use a color to shade in the number of columns equivalent to the first factor (**yellow = 0.4**)
- Use a different color to shade in the number of rows of the second factor (**blue = 0.6**)
- Count the squares that were shaded in twice (**green = 24**)
- Write it in decimal form (**0.24**)

Algorithm Connection

You can use your knowledge of multiplication to multiply two decimals.

- Ignore the decimals (**4 and 6**)
- Multiply the numbers as usual (**$4 \times 6 = 24$**)
- Count the total number of digits to the right of the decimals (**2**)
- Start at the left of your answer (24) and move the decimal 2 spaces to the left. (**0.24**)

Products of Decimals

You can use the standard algorithm to multiply two numbers with decimals together. You follow the same basic steps to find the product. Unlike when you add or subtract decimals, you don't need to worry about lining up the decimals.

Step 1: 1.54×2.8
1232

Multiply the top number by the digit in the smallest place (farthest to the right).

Step 2: 15.4×2.8
1232
0

Put a zero as a place holder.

Step 3: 15.4×2.8
1232
3080

Multiply the top number by the next smallest digit in the bottom number.

Step 4: 1.54×2.8
1232
+ 3080
4312

Add the numbers together.

FINAL STEP: Go back to the two original factors. Count the total number of digits to the right of the decimal point in both numbers. In this example that number is 3. Now, count 3 spaces from the right and add the decimal.

4.312 is the product for 1.54 and 2.8.

Add and Subtract Mixed Numbers

You can add and subtract mixed numbers.

Mixed Numbers With the Same Denominator	Mixed Numbers With Different Denominators
---	---

Step 1: Add or subtract the whole numbers

$$2\frac{2}{6} + 4\frac{1}{6} = 6$$

Step 1: Find the LCD and convert the fractions

$$1\frac{1}{3} + 3\frac{2}{4} = ?$$

Step 2: Add or subtract the numerator

$$2\frac{2}{6} + 4\frac{1}{6} = 6\frac{3}{6}$$

Multiples of 3: 3, 6, 9, 12
Multiples of 4: 4, 8, 12
LCD = 12

$$1\frac{4}{12} + 3\frac{6}{12} = ?$$

Step 3: Keep the denominator the same

$$2\frac{2}{6} + 4\frac{1}{6} = 6\frac{3}{6}$$

Step 2: Follow all the steps for adding or subtracting fractions with the same denominator

$$1\frac{4}{12} + 3\frac{6}{12} = 4\frac{10}{12}$$

Prime and Composite Numbers

There are different types of numbers. A prime number only has two factors. A composite number has more than two factors.

Factors – a number or numbers multiplied together to get a product.

Prime Numbers

Prime numbers have only two factors – 1 and itself.



All prime numbers only have 1 rectangular array.
7 can only be shown in one way.



Remember:
PRime = 1 and ME

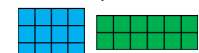
0 and 1 are neither prime, nor composite.

Composite Numbers

Composite numbers have more than two factors.



Composite numbers have more than 1 rectangular array.
12 can be shown in many ways.



Area and Perimeter

You can use formulas to solve problems related to area and perimeter.

The area is the space inside a shape. You can find the area of a shape by using the formula $L \times W$.

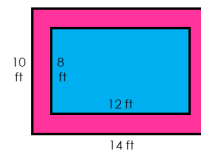
AREA



The perimeter is the distance around a shape. You can find the perimeter by using the formula $2L + 2W$

You can use your knowledge of area and perimeter to solve multistep problems.

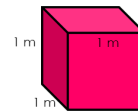
Carlos is putting a patio around his pool. What is the area of break needed to fill in this patio?



- First: Find the area of the pool
 $8 \times 12 = 96$ sq ft
- Next: Find the area of the big rectangle (the brick)
 $10 \times 14 = 140$ sq ft
- Last: Subtract the area of the pool from the big rectangle
 $140 - 96 = 44$ sq ft
Area of Patio = 44 sq ft

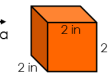
Unit Cube

A cube is a three dimensional shape with a measurement of 1 unit on all sides. Cubes can come in different sizes, but they are always the same shape.

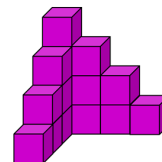


This is a cube. Each side has a measurement of 1 meter. The volume of the cube is 1 cubic meter.

This is not a cube because each side has a measurement greater than 1 unit.



You can use cubes to help find the volume of three dimensional shapes.



- Count all the visible cubes first.
 - [This shape has 13 visible cubes]
- Don't forget to count the cubes that aren't visible, but you know are there.
 - [This shape has three cubes that are not visible]
- Add all the visible and non-visible cubes together.

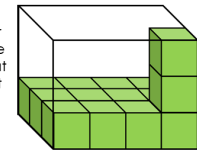
What is the volume of this shape?

Rectangular Prisms

You can use your knowledge of area to help you find the volume of a rectangular prism.

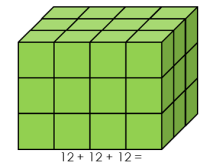
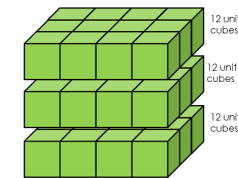
What is the volume of this rectangular prism?

This rectangular prism has a base with an area that is 4×3 or 12 unit cubes.



This rectangular prism has a height of 3 units.

When you find the volume, you can think of the base as a layer. The height tells you how many layers there are.



$12 \times 3 = 36$ unit cubes
or $3 \times 12 = 36$ unit cubes

A LOOK INSIDE...

Simplify Numerical Expressions

Sometimes numerical expressions have more than one operation. You can find the value of these expressions if you know the order of operations.

Order of Operations:

First, perform operations in parentheses

Next, multiply and divide from left to right

Last, add and subtract from left to right

Simply the following expression:

$$3 \times (2 + 4 + 5) - 10$$

1. First, you perform the operation in parentheses

$$(2 + 4 + 5) = 11$$

Now your expression reads: $3 \times 11 - 10$

2. Next, you multiply from left to right

$$3 \times 11 = 33$$

Now your expression reads $33 - 10$

3. Last, you subtract from left to right

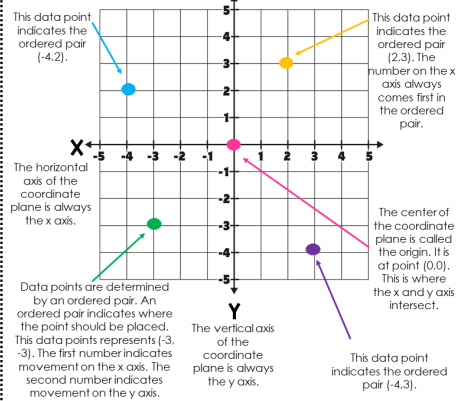
$$33 - 10 = 23$$

$$3 \times (2 + 4 + 5) - 10 = 23$$

Coordinate Plane

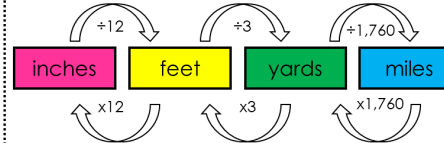
There is a system for finding points on any plane (flat surface). A coordinate plane is a set of grids that help you graph data points. There are many key attributes to a coordinate plane.

This is a Coordinate Plane



Customary Conversions

You can multiply or divide to convert measurements within the same system. You can use this chart to help you make your conversions.



Example:

If you have a rope that is 72 inches long and you wanted to know how many feet that is you would use the following equation.

$$72 \text{ inches} \div 12 = 6 \text{ feet}$$

You know that the rope is 6 feet long. If you wanted to convert that rope into yards you would use the following equation.

$$6 \text{ feet} \div 3 = 2 \text{ yards.}$$

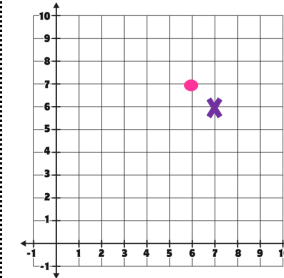
You know that 72 inches = 6 feet = 2 yards.

Ordered Pairs

An ordered pair is a specific point on a coordinate plane.

All ordered pairs have the following characteristics:

- Two numbers separated by a comma
- Numbers are included in a set of parentheses
- The first number is found by going horizontal on the X axis
- The second number is found by going vertical on the y axis.



(6, 7)

The dot on the coordinate plane indicates the ordered pair (6, 7). Notice that it is above the 6 on the x axis (horizontal) and across from the 7 on the y axis (vertical axis).

Be careful!

If you don't pay close attention you might graph the ordered pair incorrectly. Notice the X represents the ordered pair (7, 6). Make sure you always graph the first number on the x axis first.

Metric Conversions

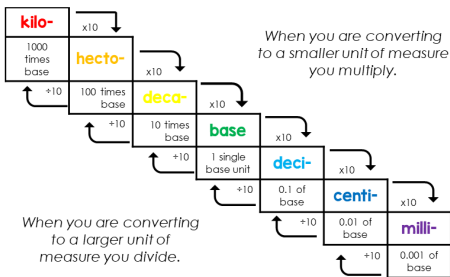
The metric system has a variety of unit measurements. Depending on what you are measuring, you will use a different unit.

METERS
measures length

LITERS
measures capacity

GRAMS
measures weight

You can convert measurements within the metric system.



Example:

If you have a rock that is 2.5 grams and you wanted to know how many milligrams it is you would multiply.

$$2.5 \text{ grams} \times 10 \times 10 \times 10 = 2,500 \text{ milligrams}$$

Divide Whole Numbers by Unit Fractions

You can divide a whole number by a unit fraction.

How many I have. $\rightarrow 4 \div \frac{1}{3} \leftarrow$ Split into how many groups.

EXAMPLE:

Megan has four candy bars. If she eats one third of her candy bar each day, how many days will she be able to eat part of her candy bar before she runs out.



Each circle represents one candy bar. You can see that each candy bar has been split into thirds. There are twelve thirds in all. She can eat one third of a candy bar for 12 straight days.

Step 1:	Step 2:	Step 3:	Step 4:
Convert whole numbers to fractions.	Find the reciprocal of the divisor (the number you are dividing by).	Change the division symbol to multiplication symbol.	Multiply the fractions (across) and simply if needed.
$\frac{4}{1} \div \frac{1}{3}$	$\frac{4}{1} \div \frac{3}{1}$	$\frac{4}{1} \times \frac{3}{1}$	$\frac{12}{1} = 12$

Adding and Subtracting Decimals

You can add and subtract decimals.

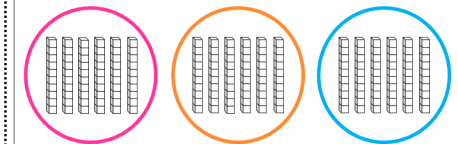
	Adding Decimals	Subtracting Decimals
Step 1: Line up numbers vertically according to the decimal.	$\begin{array}{r} 10.3 \\ + 9.42 \\ \hline \end{array}$	$\begin{array}{r} 10.3 \\ - 9.42 \\ \hline \end{array}$
Step 2: If needed, add a zero as a place holder.	$\begin{array}{r} 10.30 \\ + 9.42 \\ \hline \end{array}$	$\begin{array}{r} 10.30 \\ - 9.42 \\ \hline \end{array}$
Step 3: Starting at the lowest place value, add or subtract.	$\begin{array}{r} 10.30 \\ + 9.42 \\ \hline 19.72 \end{array}$	$\begin{array}{r} 10.30 \\ - 9.42 \\ \hline 0.88 \end{array}$
Step 4: Add a decimal to your answer.	$\begin{array}{r} 10.30 \\ + 9.42 \\ \hline 19.72 \end{array}$	$\begin{array}{r} 10.30 \\ - 9.42 \\ \hline 0.88 \end{array}$
Step 5: Check and assess your answer to see if it is reasonable.	I think my answer is reasonable. $10 + 9 = 19$ and both addends have a decimal less than .5 so my answer should be between 19 - 20.	I think my answer is reasonable. $10 - 9 = 1$. 0.3 is a little less than 0.42 which means my answer should be a little less than 1.

Dividing Decimals

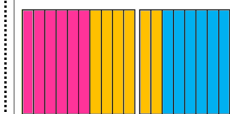
When you divide a decimal, you split it into equal groups. You can draw a model to help you divide decimals by whole numbers.

$$1.8 \div 3$$

You can draw three equal groups and put the same number of tenths each group.



You can draw a model and shade it in to show equal groups.



You can use money to represent the division expression.



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