Summer Enrichment Packet for Students going into Math 6

Sept. 2023

This summer packet is intended to help students retain the mathematical skills and knowledge they have acquired during the school year, preventing the loss of academic progress.

While completion of this packet is not mandatory, we strongly recommend students utilize this packet. Practicing skills reinforces students' understanding of concepts that they may have struggled with during the school year, helping them to start the new year with a stronger foundation. It can also help students prepare for the challenges of the upcoming school year, and promote problem-solving skills, logical reasoning, and critical thinking abilities, which are valuable not just in math, but in many other areas of life.

Suggestion...

Pick one day of the week to be your math day. On that day, work for about 15-30 minutes.

Skip around, do what makes sense that day!

Table of Contents:

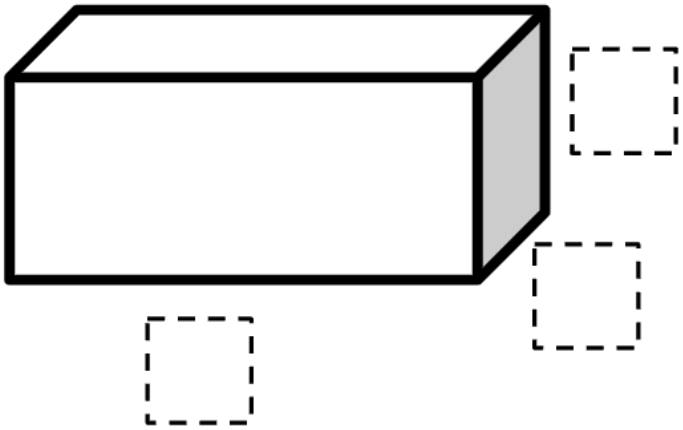
Practice MathFactsLab 2 to 3 times a week
Or
Freckle Fact Practice

Volume of Rectangular Prisms

Directions: Using the digits 1 through 9 at most one time each, fill in the boxes to create a rectangular prism with a volume that is greater than 100 cubic units. What's the least volume? What's the greatest volume?

Volume = length x width x height

Volume is measured in units cubed

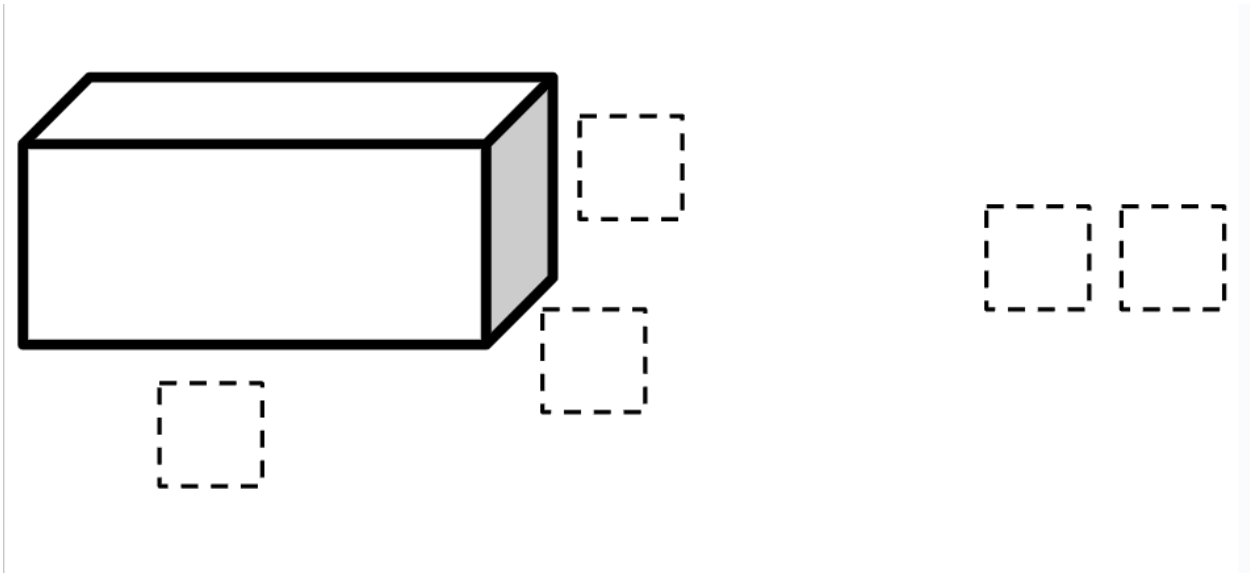


Volume of Rectangular Prisms

Directions: Using the digits 1 to 9 at most one time each, place a digit in each box to create a rectangular prism with a volume that is less than 100 cubic units. What's the least volume? What's the greatest volume?

Volume = length x width x height

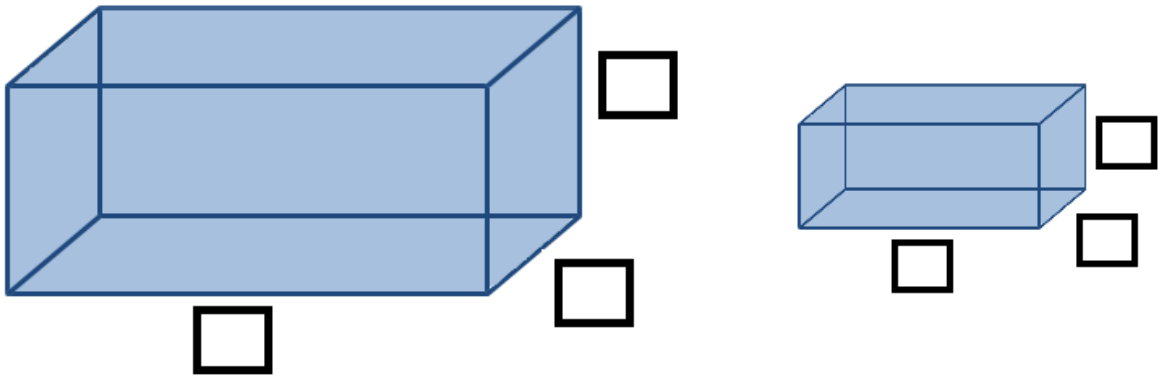
Volume is measured in units cubed



Directions: Using the digits 1 through 9, at most one time each, place a digit in each box to create two rectangular prisms where the larger one has the greatest possible volume and is double the volume of the other.

Volume = length x width x height

Volume is measured in units cubed

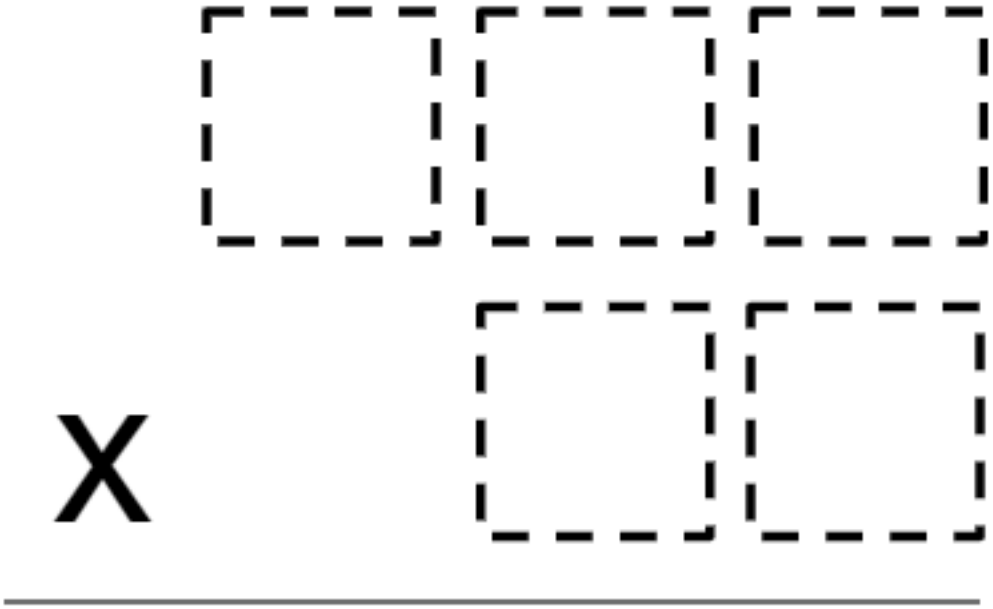


Directions: Using the digits 0 to 9 at most one time each, place a digit in each box to create a true equation.

How many solutions can you find?

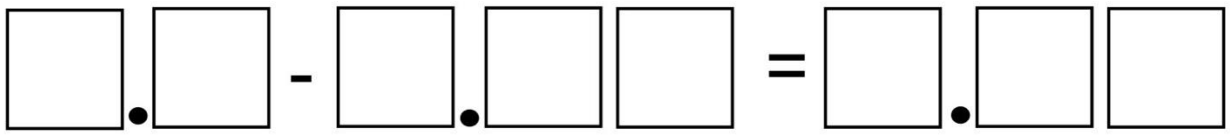
Directions: Using the digits 0 to 9 at most one time each, place a digit in each box to create a true equation with the **greatest** possible product.

Directions: Using the digits 1-9 only once, create two factors that will result in a product as close to 10,000, without going over.



Directions: Using the digits 1-9, at most once each, fill in the boxes to make a true statement.

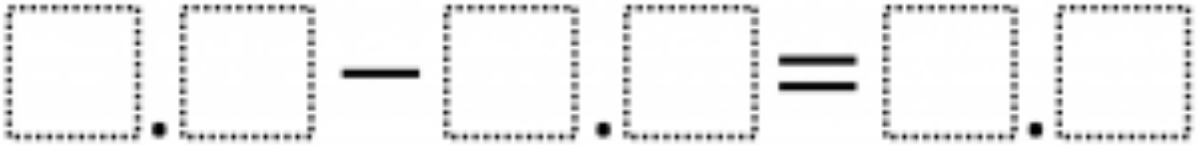
How many correct solutions can you find?



Directions: Using the digits 1-9, subtract two numbers to get a difference closest to 0.

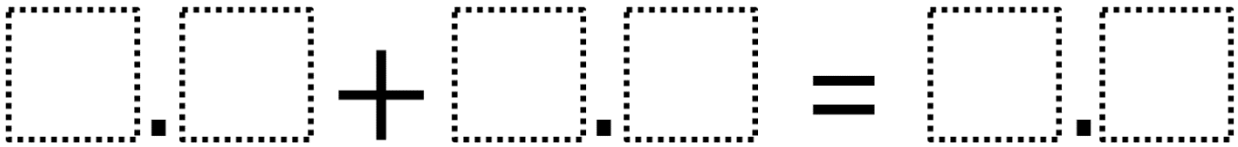
How many solutions do <u>not</u> work?

How many solutions *do* work?

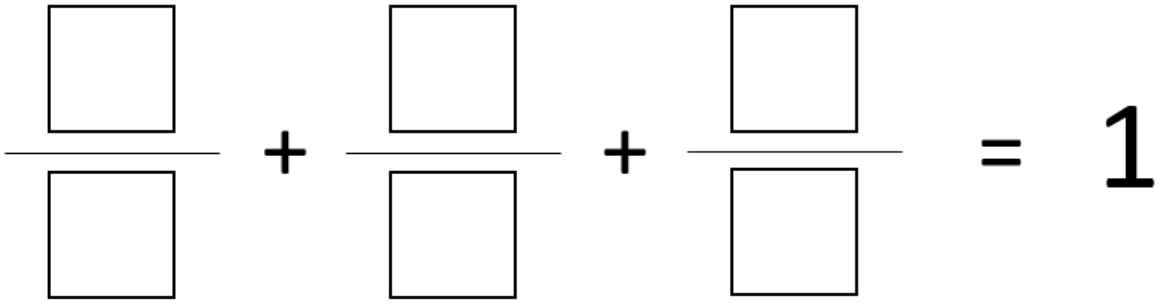


Directions: Use the digits 1 to 9, at most one time each, to make a sum with the greatest possible value.

How do you know it's the greatest possible volume?



Directions: Using the digits 1 to 9, at most one time each, place a digit in each box to make a true statement.



Decimal Place Value Chart						
hundreds	tens	ones	decimal point	tenths	hundredths	thousandths
			.			

571.346

What is the place and value of each digit?

5 _____ _____
7 _____ _____
1 _____ _____
3 _____ _____
4 _____ _____
6 _____ _____

Write in expanded form with decimals:

_____
_____
_____

Write in expanded form with fractions:

_____
_____
_____

Decimal Place Value Chart						
hundreds	tens	ones	decimal point	tenths	hundredths	thousandths
			.			

786,485

What is the place and value of each digit? **EX:**: 64 = 6… value **60** place **tens**

7 _____ _____
8 _____ _____
6 _____ _____
4 _____ _____
8 _____ _____
5 _____ _____

Write in expanded form with decimals: **EX:** 62.5 = 60 + 2 + 0.5

_____
_____
_____

Write in expanded form with fractions: **EX:** 62.5 = 60 + 2 + $\frac{5}{10}$

_____
_____
_____

Unit Fraction Multiplication and Division

You can solve with a bar model or with reasoning … or any strategy that works for you!

$3 \times \frac{1}{3} =$ ____ $5 \times \frac{1}{3} =$ $12 \times \frac{1}{3} =$

$7 \times \frac{1}{2} =$ ____ $9 \times \frac{1}{4} =$ $8 \times \frac{1}{8} =$

$8 \times \frac{1}{2} =$ ____ $8 \times \frac{1}{4} =$ $8 \times \frac{1}{12} =$

$15 \times \frac{1}{5} =$ ____ $15 \times \frac{1}{10} =$ $15 \times \frac{1}{100} =$

$3 \div \frac{1}{3} =$ ____

$5 \div \frac{1}{3} =$

$12 \div \frac{1}{3} =$

$7 \div \frac{1}{2} =$ ____

$9 \div \frac{1}{4} =$

$8 \div \frac{1}{8} =$

$8 \div \frac{1}{2} =$ ____

$8 \div \frac{1}{4} =$

$8 \div \frac{1}{12} =$

$15 \div \frac{1}{5} =$ ____

$15 \div \frac{1}{10} =$

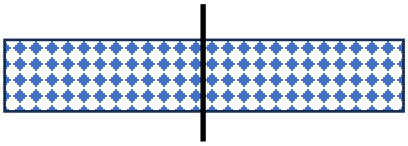
$15 \div \frac{1}{100} =$

Look Carefully! Remember… with division (and subtraction) you must -start- with what you "have".

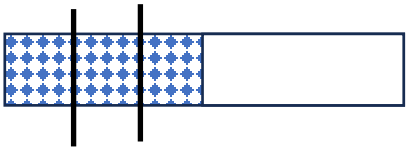
Have ÷ Size of Groups = Number of Groups

Dividend ÷ Divisor = Quotient

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



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



$2 \div \frac{1}{2} =$ ____

$\frac{1}{2} \div 3 =$

$4 \div \frac{1}{2} =$

$\frac{1}{2} \div 5 =$

$8 \div \frac{1}{2} =$

$\frac{1}{2} \div 8 =$

$10 \div \frac{1}{2} =$

$\frac{1}{2} \div 10 =$

$4 \div \frac{1}{2} =$ ____

$\frac{1}{4} \div 2 =$

$4 \div \frac{1}{4} =$

$\frac{1}{4} \div 4 =$

$4 \div \frac{1}{8} =$

$\frac{1}{4} \div 6 =$

$4 \div \frac{1}{12} =$

$\frac{1}{4} \div 8 =$

Prove it to be true!

$6{,}000 \times 97 = 582{,}000$

$9{,}223 \times 12 = 110{,}676$

$1{,}241 \times 98 = 121{,}618$

Prove it to be true!

$25{,}416 \div 6 =$ 4,236

$624 \div 13 = 48$

$4{,}752 \div 12 = 396$