



Math Intervention Experts

TSI **Math** **Made Easy**

2nd Edition

The best step by step, colorful,
friendly, learn at a glance

TSI Algebra Prep
Workbook.

Andrea Johnson & Elsa Brown
Math Intervention Experts



Hear Ye! Hear Ye! The Legal Stuff

C MATH is EASY is delighted and appreciative of your purchase of our Medical Math Workbook!

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Together we all achieve,

Elsa & Andrea

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MS in Mathematics*

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BS in Engineering
MS in Education*

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How to use this book.

How to use this workbook.

1. If you work each example problem with pencil and paper and do ALL of the independent practices, you will be successful.
2. Take the test within 1 to 2 weeks of studying.
3. Do not use a graphic calculator with this workbook.
4. Try to take the math section by itself. It is not recommended to take all 3 parts of the test in one setting.
5. At the college or university, a person has up to 13 days to take all 3 parts of the TSI exam.
6. You need a 350 to pass the math section. This is level 3. But with this workbook you can score higher.

Other services:

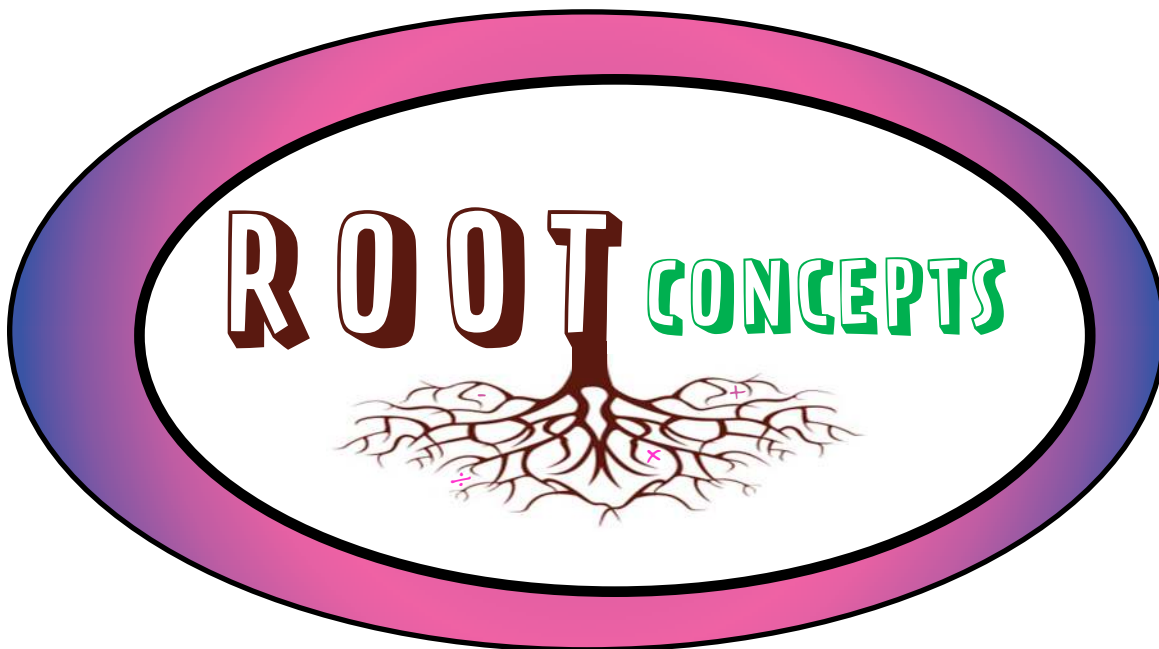
1. TSI Summer Boot Camps
2. TSI Math Online Course
3. Live webinars (coming soon)
4. Professional Development
5. C MATH Certificates
6. Accelerated Math Intervention
 - Kids, Youth
 - Adults

Workbooks

1. Multiplication Made Easy
2. TSI Math Made Easy
3. Nursing Math Made Easy
4. Medical Math Made Easy
5. More workbooks

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Chapter 1 & 2 are the most important parts.

Building Foundation

We will start with
adding, subtracting, multiplying and dividing
positive and negative integers.

Lesson

Here we will learn that every number is saying something.

An 8 is not just an 8, it is a positive 8 or a plus 8. It is giving a direction. It's going 8 to the right of a starting point or 8 up.

$$8 = +8$$

A negative 8 is not just a negative 8, it is a minus 8. It's also giving direction. It is going 8 to the left of a starting point or 8 down.

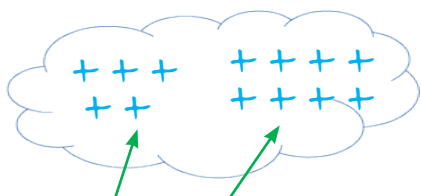
$$-8 = -8$$

The signs in front of a number are either positive or negative. Every number has a sign in front of it. Even when you don't see a sign in front, it is there.

1

Examples

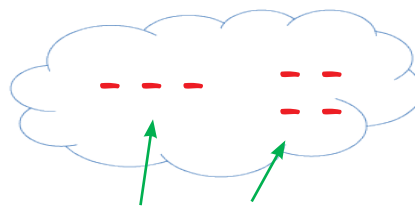
1



$$5 + 8 = +13$$

Same signs ADD
There are 13 positives.

2



$$-3 - 4 = -7$$

Same signs ADD
There are 7 negatives.

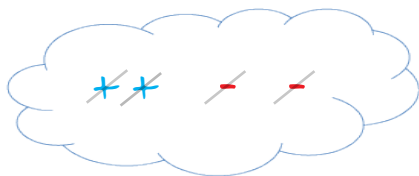
Lesson

$$2 - 2$$

What is $2 - 2 = ?$ What is 2 minus 2?

The first **2** is a positive, the second **2** is a minus or a negative **2**.
A minus and a negative are the same.

If you cover the first 2, the second 2 looks like a **-2** (a negative **2**).



What remains?
Nothing

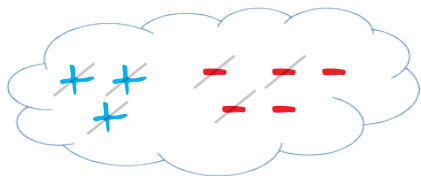
$$+2 - 2 = 0$$

Different signs **SUBTRACT**.

1a

Examples

1



$$3 - 5 = -2$$

Different signs **SUBTRACT**.

3 positives delete 3 negatives.

There are **2** negatives remaining.

A positive sign
&
a negative sign
DELETES
or
Cancel
each other out.

$$\begin{array}{c}
 + \quad - \\
 = \\
 0
 \end{array}$$

Lesson

When there are numbers with 2 signs in front, the signs can be combined into one. We combine the signs with multiplication.

Multiplication symbols		
\times	\cdot	$()$
An \times	A dot	Parenthesis

We call them "FRIENDS" or "ENEMIES".



Multiplication Rules for Signs



FRIENDS



$$+ \cdot + = +$$

A positive times a positive = A positive

$$- \cdot - = +$$

A negative times a negative = A positive

ENEMIES



$$+ \cdot - = -$$

A positive times a negative = A negative

$$- \cdot + = -$$

A negative times a positive = A negative

When two signs are side by side in front of a number and there are no numbers in between them, we multiply them. We call this multiplying the signs.

If the two signs in front of a number are the same,

They are **"FRIENDS"** or positive.

A *positive times* a *positive* 5.

$$+ (+5) = +5$$

A *negative times* a *negative* 5.

$$- (-5) = +5$$

$$- \cdot -5 = +5$$



+ (+5)	- (-5)	- 5
5	+5	+5

All can be rewritten as
5 or +5 with one sign.

If the two signs in front of the numbers are different,

Then they are **"ENEMIES"** or negative.

A *positive times* a *negative* 7.

$$+ (-7) = -7$$

A *negative times* a *positive* 7.

$$- (+7) = -7$$

$$- +7 = -7$$

$$- \cdot +7 = -7$$

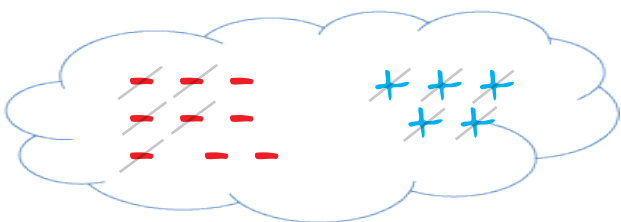


+(-7)	-(+7)	+ - 7
-7	-7	-7

Two signs together can be
re-written as one sign.

2 Examples

1



$$-9 - (-5)$$

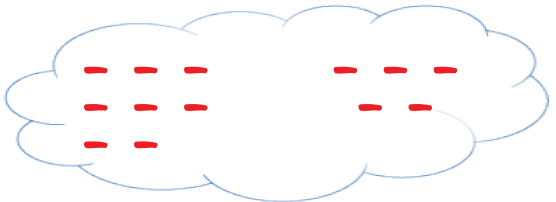
$$-9 - (-5) \quad \text{---} \square \text{ FRIENDS}$$



$$- \cdot - = +$$

$$-9 + 5 = -4$$

2



$$(-8) + (-5)$$

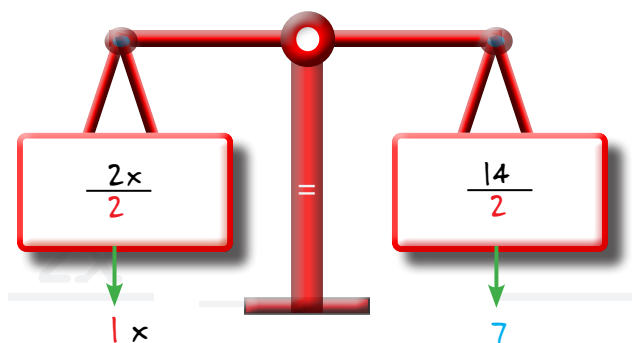
$$\text{ENEMIES} \quad \text{---} \square \quad (-8) + (-5)$$

$$+ \cdot - = -$$

$$-8 - 5 = -13$$

POWER OF ONE

$$2x = 14$$



$$x = 7$$

The goal for x is:

1. To be $1x$
2. To be positive
3. To be alone

$$\begin{aligned} 1 \cdot x &= x \\ +1 \cdot x &= +x = x \\ x &= \dots \end{aligned}$$

18

Examples

1

$$3x = 15 \implies \frac{3x}{3} = \frac{15}{3}$$



$$1 \cdot x = 5$$

$$x = 5$$

P of **1**
Power of One

If you divide by 3 on one side, you have to divide by 3 on the other side.

2 Word Problem

Four times the sum of a number and five is the sum of three times the number and twenty-five.

4 add x 5 =

Four times the sum of a number and five is

$$4(x + 5) =$$

add 3 x 25

the sum of three times the number and twenty-five.

$$3x + 25$$

$$4(x + 5) = 3x + 25$$

$$4(x + 5) = 3x + 25$$

$$4x + 20 = 3x + 25$$

$$\begin{array}{r} 4x + 20 = 3x + 25 \\ -3x \qquad \qquad -3x \\ \hline 1x \qquad \qquad \qquad 0 \end{array}$$

$$\begin{array}{r} 1x + 20 = 25 \\ -20 \qquad \qquad -20 \\ \hline 0 \qquad \qquad \qquad 5 \end{array}$$

$$x = 5$$



Math Intervention Experts

I hope you like our TSI Math Workbook. We designed it with you in mind. We knew we could not be there with you, so we tried to think of ALL the questions you might have and then wrote it step by step just for YOU.

This would be an excellent book to have around the house. This book is for anyone that is starting algebra. Now we do not have EVERYTHING in here, but it is a great start with 158 pages.

I know you have not seen an algebra workbook like this before.

We made it look easy even for a 12 year old.

We have a copy for you and C MATH is EASY.

I hope to hear from you soon.

Sincerely,

Andrea Johnson