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WORDS ARE POWER

Knowing the words gives you power.

Break It Down:
These words tell you that the problem is about adding:

add	together	altogether	sum
in all	both	gained	received
total	won	saved	

These words tell you the problem is about subtracting:

minus	subtract	how many more	how much
from	left	difference between	how much heavier
lost	remain	how many less	how much taller
withdrawal	spend	need to	how much farther
more	fewer		

The Game: Write + for addition or – for subtraction.

minus _____	total _____	together _____	left _____
from _____	sum _____	fewer _____	more _____
add _____	in all _____	need to _____	lost _____

The Game: Write + for addition or – for subtraction. Write the clue words.

1. What is the sum of five and nine? ___, Clue word: _____
2. How much taller is Mike than his friend? ___, Clue word: _____ _____
3. What is the total number of players on the team? ___, Clue word: _____
4. How much money did you have left? ___, Clue word: _____ _____
5. Mari took six cookies from her friend. ___, Clue word: _____

ORDER OF OPERATIONS

Remember PEMDAS.
When you have more than one operation to do, you must follow the order of operations.
Here is the order:

P = Parentheses ( )
E = Exponents (2^2)
M = Multiply (•, x) Multiplication and division rank the same. Go from left to right doing any "M" or "D" as you find them.
D = Divide (÷, /)
A = Add (+) Addition and subtraction rank the same. Go from left to right doing any "A" or "S" as you find them.
S = Subtract (–)

Break It Down:

The problem ➜ **15 – 5 • 2**

Follow the order!

Multiply first. ➜ **5 • 2**

Subtract. ➜ **15 – 10**

Work the problem. ➜ **15 – 10 = 5**

Answer. ➜ **5**

The value of 15 – 5 • 2 is 5!

The Game: Fill in the blanks.

The problem ➜ 20 – 3 • 2
Follow the order!
Multiply first. ➜ 3 • 2 = _____
Subtract. ➜ 20 – _____
Work the problem. ➜ 20 – _____ = _____
Answer. ➜ _____

The value of 20 – 3 • 2 is _____!

UNIT 4

PARENTHESES RULE!

Parentheses come first!
Remember the PEMDAS order:

- Parentheses.
- Exponents.
- Multiply and divide from left to right.
- Add and subtract from left to right.

1. 2. 3. 4.
P E M A
or or
D S

Break It Down:

The problem ➜	**5(1 + 1)**
We add 1 + 1 first. ➜	**5(2)**
Multiply. ➜	**5(2) = 10**
Answer. ➜	**10**

The value of 5 • (1 + 1) = 10.

The Game: Answer the questions and fill in the blanks.

$$(40 + 5) \div 3^2$$

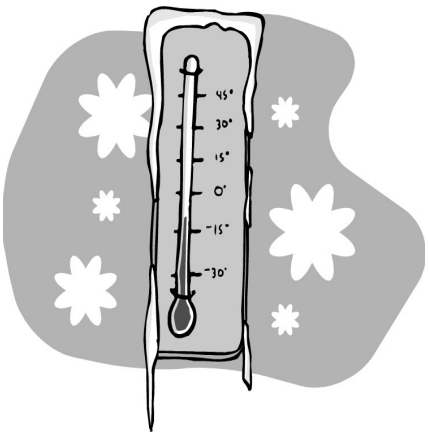
Do you see parentheses in the problem? _____
Do you see an exponent in the problem? _____
What is the base number? _____
What is the exponent? _____
Do you work the parentheses or the exponent first? _____

The problem ➜	**$(40 + 5) \div 3^2$**
Work the parentheses. ➜	**(_____) ÷ 3^2**
Multiply out exponent. ➜	**45 ÷ (3 x _____)**
Divide. ➜	**45 ÷ 9**
Answer. ➜	_____

The value of $(40 + 5) \div 3^2$ is _____.

UNIT 4

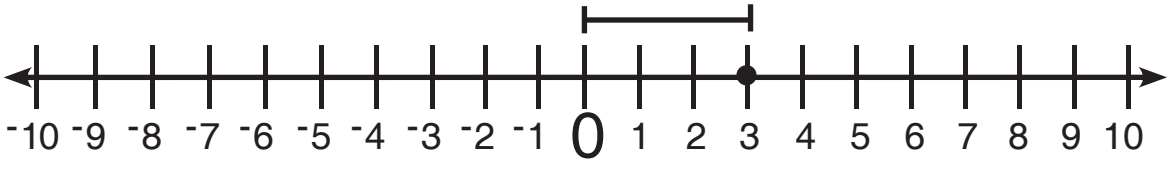
ABSOLUTELY!



Absolute value asks this question: How many places from zero is the integer?

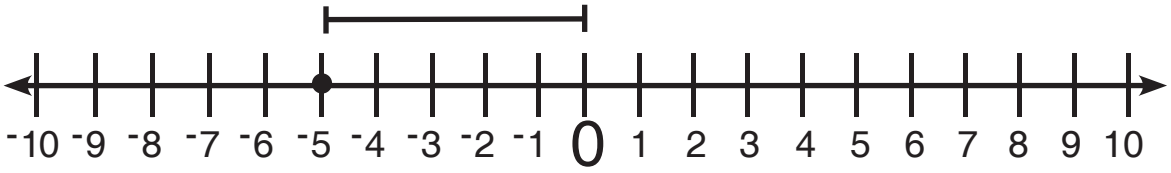
Break It Down:
Ask, "How many places from zero is the integer?" This answer is never negative. It is zero or a positive integer.

What is the absolute value of 3? Count the places from zero to 3.



3 is 3 places from 0!
3 has an absolute value of 3, because it is 3 places from 0.

What is the absolute value of ⁻5? Count the places from zero to ⁻5.



⁻5 is 5 places from 0!
⁻5 has an absolute value of 5, because it is 5 places from 0.

Math Fact: The absolute value of zero is zero! ZERO is ZERO places from zero!

Which question do you ask to find the absolute value?

_____

UNIT 5

THE DISTRIBUTIVE PROPERTY

The Distributive Property has fun with parentheses. Distribute means to multiply the number outside of the parentheses with each number inside the parentheses.

Break It Down:

The problem ➜ $8(1 + 4)$

When a number is directly outside the parentheses ( ), you may distribute.

$8(1 + 4)$

The number 8 gets distributed to the 1 and the 4. Here are the next steps in the problem:

Distribute the 8. ➜ $8(1 + 4)$

Group the numbers into two multiplication problems. ➜ $(8 \bullet 1) + (8 \bullet 4)$

Multiply and add. ➜ $8 + 32$

The answer ➜ 40

The Game: Answer the questions.

When a number is just outside the parentheses, what may you do?

_____

Do the parentheses signal for you to divide or multiply?

_____

What property is this?

_____

UNIT 6