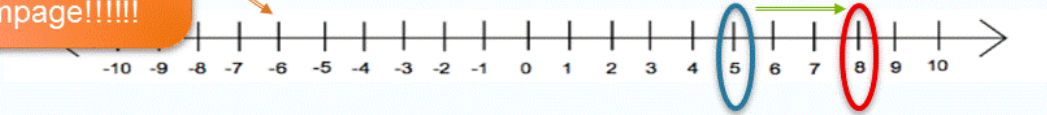


If you don't have a number line on your paper I will rampage!!!!

Warm UP (7 min)

But I want to go RIGHT!!!!



1. $5 - () = 8$

2. $() + 4 = -7$

3. $1 - () = 7$

4. $() - 3 = 9$

5. $() - 5 = -8$

6. $-4 + () = 0$

7. $() - 5 = 2$

8. $-6 - () = 0$

Start at 5

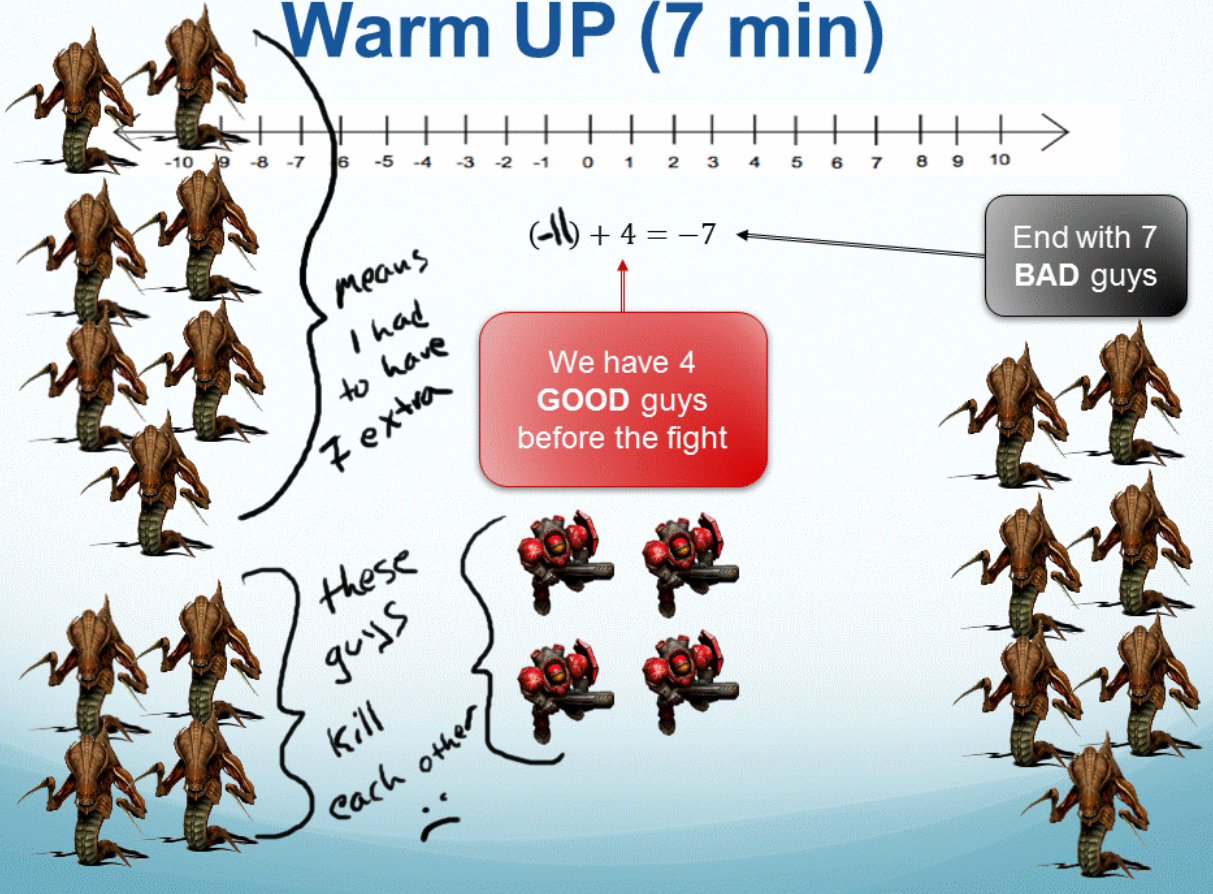
$$5 - () = 8$$

End at 8

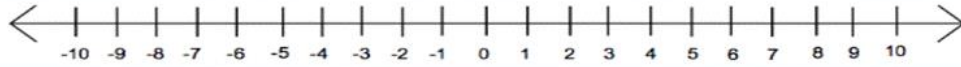
Negative says go LEFT!!!!
But I know I want to go right.

So what number will allow me to change direction?

Warm UP (7 min)



WARM UP (6 min)



1. $5 - (-3) = 8$

2. $(-1) + 4 = -7$

3. $1 - (-6) = 7$

4. $(12) - 3 = 9$

5. $(-3) - 5 = -8$

6. $-4 + (4) = 0$

7. $(7) - 5 = 2$

8. $-6 - (-6) = 0$

SAME SIGN: Keep the sign
and add the numbers

Different SIGN: Subtract the
numbers and then give your
answer the sign of the
larger number.

Ex.) $5 - 7 = -2$

Vocab

Product ~ Quotient ~ Difference ~ Sum

Please Never
Use this again
It looks like
the letter
x.

Definition: Product means multiplication	Illustration: Instead. $5 \cdot 4 = 5(4) = (5)(4) = 20$
<p>Product</p>	
Examples: The product of 5 and 4 is 20.	Non-Examples: 5 product 4 \neq 20 ↑ Don't use in place of "times"

Vocab

Product ~ Quotient ~ Difference ~ Sum

↙ I don't like this either! make everything

Definition: Quotient means divide.	Illustration: $8 \div 4 = 2$ a fraction $\frac{8}{4} = 2$
<u>Quotient</u>	
Examples: The quotient of 8 and 4 is 2.	Non-Examples: $8 \text{ Quotient } 4 \neq 2$ <hr/> The quotient of 4 and 8 is NOT 2 its $\frac{4}{8} = \frac{1}{2}$

Vocab

Product ~ Quotient ~ Difference ~ Sum

<p>Definition: Difference means Subtraction.</p>	<p>4 less than 3 is -1 3 minus 4 is -1 the difference of 4 and 3 = -1</p> <p>Order Matters!</p>
<p>Difference</p>	
<p>Examples: $5-3=2$ The difference of 5 and 3 is 2</p>	<p>Non-Examples: $5-2=3$ is NOT 5 less than 2 5 difference 2 Subtract 5 from 2</p> <p>these are tricks because of order.</p>

Unit 1: Numbers and Expressions

Day 4/9: Algebraic Expressions

This Algebraic
Expression equals a
simple **Natural Number**



$$5 + 3 + (5^2 - 5 \cdot 4 + 3)$$

How do we find that
number?

Write this above
every problem

P.E.M.D.A.S.



1. (Parentheses)
2. Exponents²
3. · Multiplication and – Division
4. + Addition and - Subtraction

$$5 + 3 + (5^2 - 5 \cdot 4 + 3)$$

Write this above
every problem

P.E.M.D.A.S.



$$5 + 3 + (5^2 - 5 \cdot 4 + 3)$$

$$5 + 3 + (25 - 5 \cdot 4 + 3)$$

$$5 + 3 + (25 - 20 + 3)$$

$$5 + 3 + (5 + 3)$$

$$5 + 3 + (8)$$

$$8 + 8$$

$$16$$

Write this above
every problem

P.E.M.D.A.S.

$$\frac{(5^2+3)}{14}$$

$$\frac{(25+3)}{14} = \frac{28}{14} = 2$$

$$\frac{25}{5} + 5 \cdot 2 + 3$$

$$5 + 5 \cdot 2 + 3$$

$$5 + 10 + 3$$

$$15 + 3$$

$$18$$

Write this above
every problem

P.E.M.D.A.S.

$$(2 \underbrace{\quad} \underbrace{\quad} \underbrace{\quad} 2) \cdot 4$$

$$(2 + + + 2) \cdot 4$$

$$(2+2) \cdot 4$$

$$4 \cdot 4$$

$$16$$

$$3 + 2 \cdot 3^2$$

$$3 + 2 \cdot 9$$

$$3 + 18$$

$$21$$



Expressions



Note: Find the NUMBER first... then figure out what is happening to it.

Three less than seven times a number

$$7n - 3$$

Notice how the order in math is different!



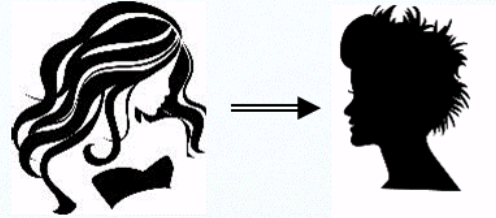
Expressions



Note: Find the NUMBER first... then figure out what is happening to it.

Four more than p .

$$\boxed{4+P} = \text{Perfect}$$



$$\text{Not } 4_p = P+P+P+P$$



Expressions

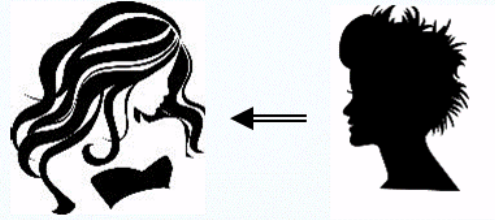


Note: Find the NUMBER first... then figure out what is happening to it.

The quotient of **m** and ten

$m \div 10 \leftarrow$ OKAY
BUT
UGLY

$\frac{m}{10} = \text{Perfect}$





Expressions



Three times the difference of seven and a **number**.

$$3 \cdot (7 - n)$$

difference
always protect with ()



Expressions



Four more than a number, divided by ten.

$$\frac{(4+n)}{10}$$

If you said:

$4+n \div 10$ this is
Super WRONG!

$(4+n) \div 10$ is OKAY
its just UGLY



Expressions



Five minus the product of y and three.

$$3 \cdot y - 5$$



Expressions



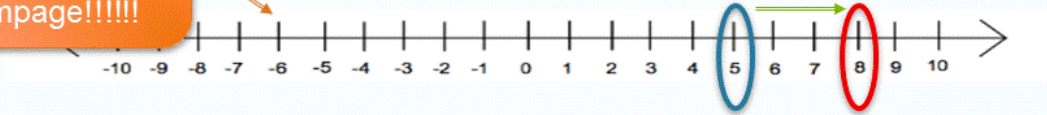
Five more than a number, is multiplied by six.

$$(5+n) \cdot 6$$

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