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UP!!

WARM-UP

Simplify each expression.

1) $-2x^2 + 4x - 19 - 12 + 5x^2 - 5x =$

2) $-3(7x - 2y) + 18x =$

3) Ms. Bartram says that her age is equivalent to three times the sum of her brother's age and four.

a. Write an expression that represents Ms. Bartram's age.

b. If Ms. Bartram's brother is seven, then how old is she?

4) In a local newspaper, it was reported that Lebron James makes five times the quotient of Kobe Bryant's salary, k, and three.

a. Write an expression that represents the salary of Lebron James.

b. If Kobe makes one hundred and fifty dollars, them how much should Lebron expect?

Lesson Essential Question:

How does backtracking help us solve an equation efficiently?

Whenever you hear "INVERSE OPERATIONS", think OPPOSITES!!

To get from point A to point B, I must be able to get from (or backtrack from) point B to point A

POINT A  **POINT B**

Additive Inverse

4 + (-4) = 0

the sum of a number and its' opposite equals zero.

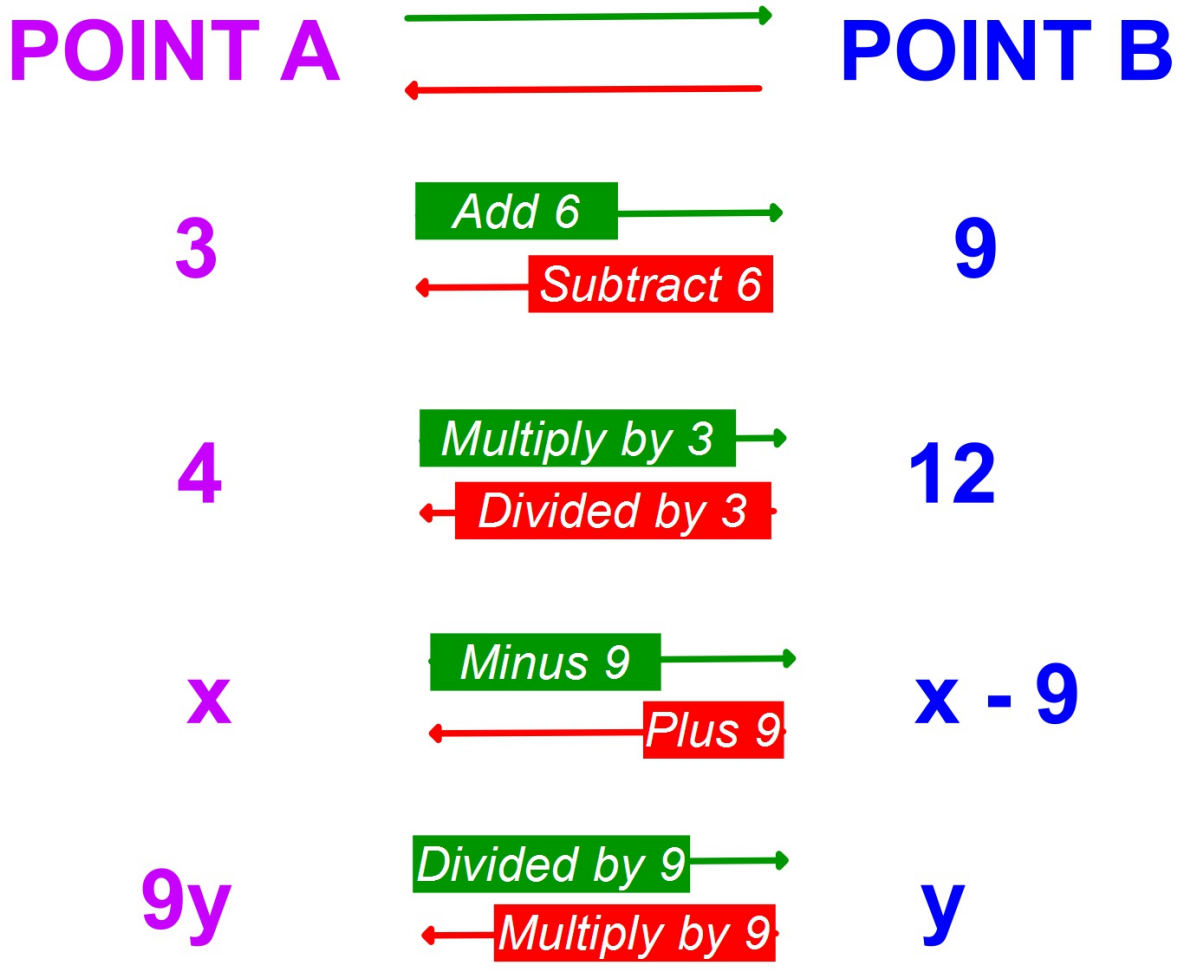
ALWAYS!!

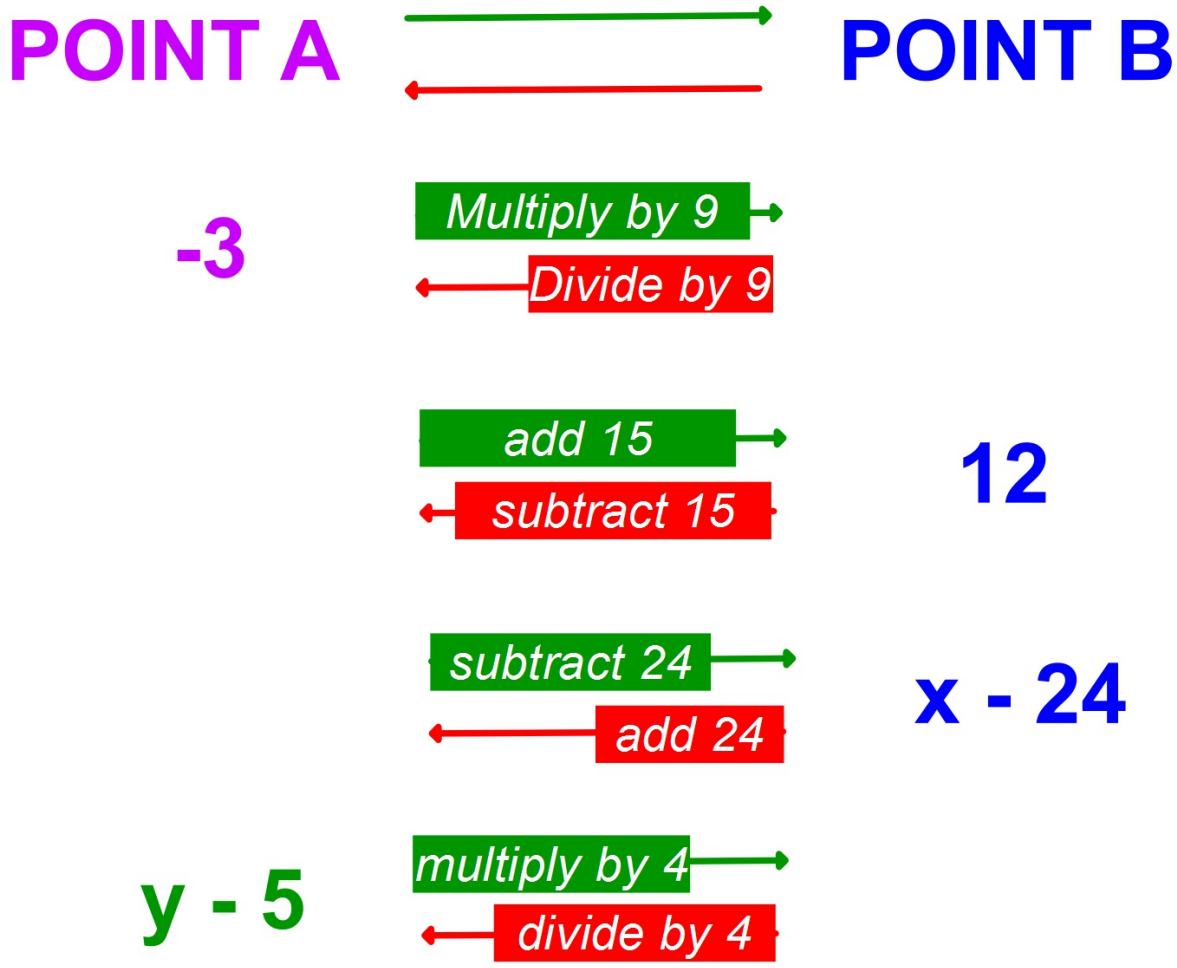
Multiplicative Inverse

4 ● 1/4 = 1

the product of a number and its' reciprocal equals one.

ALWAYS!!


POINT A
POINT B
3
Add 6
Subtract 6
9
4
Multiply by 3
Divided by 3
12
x
Minus 9
Plus 9
x - 9
9y
Divided by 9
Multiply by 9
y


POINT A
POINT B
-3
Multiply by 9
Divide by 9
add 15
subtract 15
12
subtract 24
add 24
x - 24
y - 5
multiply by 4
divide by 4

Lesson Essential Question:

How does backtracking help us solve an equation efficiently?

EXAMPLE: $x + 8 = 21$

1) DRAW your RIVER (a line to separate left-side from the right-side.)

$x + 8 = 21$

2) Perform inverse (or opposite) opperation.

$x + 8 = 21$

$-8 = -8$

3) Box your final answer.

$x = 13$

4) Plug your answer into the original equation.

EXAMPLE: $3x = 21$

1) DRAW your RIVER (a line to separate left-side from the right-side.)

$3x = 21$

2) Perform inverse (or opposite) opperation.

$\frac{3x}{3} = \frac{21}{3}$

3) Box your final answer.

$x = 7$

4) Plug your answer in.

DID MY ANSWER HAVE???

- VARIABLE TERM
- an EQUAL SIGN
- CONSTANT

Lesson Essential Question:

How does backtracking help us solve an equation efficiently?

EXAMPLE: $x - 12 = 37$

1) DRAW your RIVER (a line to separate left-side from the right-side.)

$x - 12 = 37$

2) Perform inverse (or opposite) opperation.

3) Box your final answer.

4) Check your answer.

EXAMPLE: $-8x = 64$

1) DRAW your RIVER (a line to separate left-side from the right-side.)

$-8x = 64$

2) Perform inverse (or opposite) opperation.

3) Box your final answer.

4) Check your answer.

DID MY ANSWER HAVE???
a VARIABLE TERM, an EQUAL SIGN, a CONSTANT

1) $26 = 8 + v$

2) $v - 10 = -3$

3) $15 + b = 23$

4) $\frac{x}{5} = 2$

5) $m + 4 = -12$

6) $-13m = -377$

7) $m - 9 = -13$

8) $-8 = p - 13$

9) $v - 15 = -27$

10) $418 = -22a$

1) DRAW your RIVER.
2) Perform the inverse operation.
3) Box your final answer.
4) Check your answer.

1) A recipe for cookies calls for $3\frac{1}{4}$ cups of sugar. Amy has already put in $3\frac{1}{9}$ cups. How many more cups does she need to put in?

2) Your mother gave you $13.32 with which to buy a present. This covered $\frac{3}{5}$ of the cost. How much did the present cost?

3) If the weight of a package is multiplied by $\frac{5}{7}$ the result is 40.5 pounds. Find the weight of the package.

4) A stray dog ate 12 of your muffins. That was $\frac{3}{10}$ of all of them! With how many did you start?

Your family is purchasing new carpet for your bedroom. After measuring your room, the carpenter tells you the length is 7 feet and your width is represented by (x + 5).

1) Write an expression that finds the area of your bedroom.

2) Suppose the area of your bedroom is 98 ft^2. Write an equation and solve to find the width of the bedroom?

3) What if you wanted to add border around your room. How much border would you need?