

Alg 1 Notes

17 September 2014

(order of operation)

stick

1.) $((13-3) + (14 \div 2)^2) \cdot 5^2 = 1475$

quiz

2.) $(16 \div 8)^2 + ((17+5) \cdot 4^2) = 356$

problems

3.) $7 + (8 \cdot (9-5)^2) - 7 = 128$

1.3 properties of numbers

I can recognize and apply the properties of numbers to simplify algebraic expressions

Hints

Additive Identity: +0, plus zero $\heartsuit + 0 = \heartsuit$

Look for:

multiplicative Identity: times by 1 $\ddot{u} \cdot 1 = \ddot{u}$

Additive Inverse: opposites

multiplicative Inverse: reciprocal $\frac{3}{15} \cdot \frac{15}{3} = \frac{45}{45} = 1$ cross cancel also

$$\frac{1}{x} \cdot \frac{x}{1} = 1$$

Zero product property: times by zero

Commutative property: the order changed

Associative property: parenthesis moved

$$\begin{aligned} \triangle 3xy + 4m + 2 &= 2 + mA, 3xy \text{ or } 2 + 3xy + 4m \\ &= 3yx + mA + 2 \end{aligned}$$

New Properties

Name	Definition	example
reflexive property	Any number is equal to itself!	$x = x$ $5 = 5$
exactly the same		$x + 3 + y = x + 3 + y$ Exactly the same on both sides

Name	definition	example
symmetric Property 2 equations swapped sides	The side of the equal sign doesn't matter	$B=x$ $x=8$ if then

white board

1. if $x+2=9$ then $9=x+2$ symmetric property
2. $z-4=z-4$ reflexive property
3. $x+y+z=x+y+z$ reflexive property
4. $c+3=y$ then $y=c+3$ symmetric property

if $x+7=2$ then $2=x+7$

$m+z=50$ $50=m+z$

Name	Definition	example
distributive property mail man	multiplication over addition or subtraction draw the rainbows $3(x+7)$	$3(x+7)$ $3 \cdot x + 3 \cdot 7$ $5 \cdot m + 5 \cdot 6$ $5(m+6)$
Transitive property	If $a=b$ and $b=c$ then $a=c$	if $x=5$ and $y=5$ then $y=x$ and $x=y$

Test on Tuesday 23 September