

Please rewrite the **5 rules to Algebra** (you need to memorize these like bedmas)

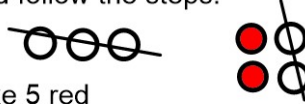
1. Opp. oper.
2. Same to both
3. SAMDEB
4. Isolate Var.
5. Simplify

You are learning the steps to solving algebra question using 2 different methods, math and algebra tiles. You need to know both and follow the steps.

Like with integers  $(-3) - (-5) =$

we start by making 3 red, since we cannot take 5 red

we need to make 2 zero pairs . . . . .



**Division is tricky**

We first need to know how to draw

If  $m =$  then  $\frac{m}{2} =$

**Math**

$\frac{m}{2} = 3$  Question

$(2)\left(\frac{m}{2}\right) = (3)(2)$  Add brackets and  
mult by 2 on both sides

~~$(2)\left(\frac{m}{2}\right) = (3)(2)$~~  I will rewrite it,  
you don't have to

Now cancel the 2s

$m = 6$  Your Answer is left

**Algebra Tiles**

I need twice as much, so I draw it again reversed

Now we draw the total add up both sides

This is your answer

$\frac{m}{3} =$

$\frac{m}{4} =$

Now for the negatives

if  $1 =$

and  $-1 =$

then  $-m =$

but  $\frac{-m}{2} =$

but this is confusing, we cannot tell what the shape is  
it could be  $2\left(\frac{-m}{2}\right)$ , we cannot draw it this way

better  
 light and doubled up

best  
 dotted and solid

before to start we need to understand that

$$\frac{-6}{3} = -2 \quad \text{or} \quad \frac{6}{-3} = -2 \quad \text{or} \quad -\left(\frac{6}{3}\right) = -2$$

so

$$\frac{-m}{3} = \text{is the same as} = \frac{m}{-3} = -\left(\frac{m}{3}\right)$$

Next example is

$$\frac{-m}{3} = -2$$

### Math

$$\frac{-m}{3} = -2 \quad \text{We Mult by 3 or -3}$$

if we mult by 3 the var. is still neg. ✗

if we mult by -3 the var. is pos. ✓

$$\cancel{(-3)} \cdot \cancel{\left(\frac{-m}{3}\right)} = (-2) (-3)$$

Now **cancel the 3s** and **the neg.**

$$m = 6$$

If your left with  $(-m) = (-6)$

For today do one example

$$\frac{m}{2} = -4 \quad \text{by both methods}$$

### Algebra tiles

$$\boxed{\phantom{m}} \boxed{\phantom{m}} \boxed{\phantom{m}} = \boxed{\phantom{m}} \boxed{\phantom{m}}$$

question

need to draw it 2 more times

$$\boxed{\phantom{m}} \boxed{\phantom{m}} \boxed{\phantom{m}} = \boxed{\phantom{m}} \boxed{\phantom{m}}$$

$$\boxed{\phantom{m}} \boxed{\phantom{m}} \boxed{\phantom{m}} = \boxed{\phantom{m}} \boxed{\phantom{m}}$$

work

$$\boxed{\phantom{m}} \boxed{\phantom{m}} \boxed{\phantom{m}} = \begin{array}{cc} \boxed{\phantom{m}} & \boxed{\phantom{m}} \\ \boxed{\phantom{m}} & \boxed{\phantom{m}} \\ \boxed{\phantom{m}} & \boxed{\phantom{m}} \end{array}$$

answer

just write **flip** (Might need to explain on test)

When they flip sides we add the opp and cancel

$$\begin{array}{cc} \boxed{\phantom{m}} & \boxed{\phantom{m}} \\ \boxed{\phantom{m}} & \boxed{\phantom{m}} \\ \boxed{\phantom{m}} & \boxed{\phantom{m}} \end{array} = \boxed{\phantom{m}} \boxed{\phantom{m}} \boxed{\phantom{m}}$$