Math game design: multiplication we love
Posted by MariaD - 2008/10/31 19:21

What is cool, unusual, bizarre, interesting, inviting - in multiplication? Make your list of five things. Here is mine:

1 - Behold the fractal power of powers!
http://omnisapien.files.wordpress.com/2008/01/fractal-fingers.jpg

2 - I can count to 512 on my fingers! Can you? Never trust the man who can count to 1024! (hint: think binary)

3 - My favorite model of multiplication (combinations) is excellent for making chimeras for Halloween:
http://www.naturalmath.com/images/blog/logo.png

4 - My favorite multiplication craft: the mirror book.
http://www.naturalmath.com/workshops/07march2003/9.jpg

5 - Googol is a cool multiplication word. It is 10 multiplied by itself 100 times. Here:
10,â€‹000,000,000,â€‹000,000,000,â€‹000,000,000,â€‹000, 000,000,â€‹000,000,000,â€‹000,000,000,â€‹000,000, 000,â€‹000,000,000,â€‹000,000,000,â€‹000,000,000,â€‹000,000,000

No, I did not type it - I copied it from Wikipedia. You are welcome to check if they got the zeroes right, or if somebody quietly removed or added some.

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Re:Math game design: multiplication we love
Posted by BrianH - 2008/11/03 13:36

Here are some things I find kind of interesting about multiplying and dividing:
1. Multiplying by zero always equals zero. No matter how long the problem is, if it includes multiplying by zero, the answer is zero.
Ex. 23,000,158,096*394,761*823,569,247*0*960,387,358,824.7374=0
2. When you multiply two negative numbers you get a positive number.
3. Prime numbers are still being found. In September a prime digit with 13 million digits was discovered. (They used computers to find it)

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Re:Math game design: multiplication we love
Posted by BrianH - 2008/11/03 13:38

BrianH wrote:

3. Prime numbers are still being found. In September a prime digit with 13 million digits was discovered. (They used computers to find it)

Oops, that should say a prime number with 13 million digits was discovered.

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Re:Math game design: multiplication we love
Posted by jasperb - 2008/11/03 19:03

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in the nine multiplication if you add the digets of the product it will equal nine.
so if it is 9x7 it =63

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Re:Math game design: multiplication we love
Posted by Natural Math Club - 2008/11/04 13:35

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1. Mirrored numbers 71 turns into 17. What is the equation?

x=71 y=17

x/10=7.1
floor (x/10)=7
10*floor(x/10)=70
x-10*floor(x/10)=71-10*7=1

*10 + floor (x/10)=17

x=91
9.1
9
90
1
19

James

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Re:Math game design: multiplication we love

Posted by Natural Math Club - 2008/11/04 13:43

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1. When you multiply by many-digit numbers, you have "added zeros" in there for place value.
Benjamin

2. Powers of ten

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Re:Math game design: multiplication we love

Posted by BrianH - 2008/11/10 13:31

In some of the video games I play there are places where multipliers/dividers are used. Some of them are helpful and some are really annoying.

In Burnout there is a crash test where you try to score the most points possible by blowing up vehicles-your own counts too. There are multipliers- a times 2, a times 4, and a heartbreaker, which divides your score in half. The multipliers are well placed so it's hard to get to the times 4 without hitting the heartbreaker too. The heartbreaker takes away your other multipliers-annoying!

In Lego Star Wars (and other Lego games)you can buy multipliers. They are very expensive but worth it. If you buy more than one, they multiply together. So if you buy the 10 times and 6 times multipliers, you will have the Lego studs you find multiplied by 60.

In Spore in the creature and tribal stages, the more little guys you have dancing or playing instruments, the easier it is to impress the other tribes and get them to be your allies.

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Re:Math game design: multiplication we love

Posted by tashtego14 - 2008/11/10 22:43

Things I find interesting about multiplication

1. the mirror book. in the picture of the book, there is five reflections. being reflected is a flower, two donut shaped things, three ladybugs, and four squares. By counting the number of flowers, you get 5 x 1. If you count the number of donuts, you get 5 x 2. Etc. It's a beautiful times table.

2. Fractals. They multiply as you add a layer, getting more and more complicated. But if you zoom in, you seem to go right back to where you started!

3. The more zero's in a multiplication problem, the easier I find the problem... usually.

4. The 9's finger trick. Is that a coincidence, or some freak of nature?

5. If math is everywhere, why do we usually keep it to the confines of a classroom?

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Re:Math game design: multiplication we love

Posted by MariaD - 2008/11/11 08:26

List of game mechanics from Wikipedia.

Putting fun in functional

Top level list from Board Game Geek

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Re:Math game design: multiplication we love

Posted by Benjy - 2008/11/17 11:21

My dad and I came up with a cool new Idea and here it is.
Say your in a game, and your standing in an ancient temple, and there's a rotten old door that you can blast to pieces that leads to a secret room, but the only problem is, that there's a shield surrounding it, so you have 2 options:1, you can punch through the shield and go through to the next level losing life points, or 2, you can do a multiplication problem to deactivate the shield, here's an ex. 165=(5x3x11)when you have the original number and you need to find the prime factors of it, first you find the prime numbers that go into 165 and I (as most people probably would) think of 5, now think what number will multiply into 165 5 times 33 is 33 a prime number, no, does 2 go into 33, no 3, yes! It goes into it 11 times, and its a prime number now is 11 a prime number, yes! So the answer is 5x3x11 and that's the code you'd type in (except without the x) here's another one, 128 see if you can figure it out.

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Re:Math game design: multiplication we love

Posted by BrianH - 2008/11/17 19:31

My game idea is for a fantasy role-playing game where you get to go through levels and generations and practice multiplication and division as you play.
You get to choose if you want to be a human, elf, or dwarf if you're on the good side. If you're on the bad side, you can choose to be a skeleton, orc, or a dark elf. You get quests to complete and earn experience points (XP). An example of a quest might be to kill 4 skeletons or find a dwarf in a cave that is full of dark elves.
You would get XP and also money by completing quests and knocking out bad guys just like in games like World of Warcraft, City of Heroes, and Warhammer Online.
Where the math comes in is that you can find or buy multipliers. It is very expensive to buy them so finding them is better. You can combine the multipliers. The game will tell you how many points you have earned without the multiplier and then it will ask you to solve the problem of what your score is multiplied. You get 2 chances and then you lose your multipliers. You can find new ones later though. There could be different levels. Maybe one where your score doubled so you'd practice multiplying by 2 and a level where your score got squared so you would practice that. You could also have a level where you multiplied by 10.
There could be some division in the game too. Wizards and magic casters might cast a dividing spell on you. They might divide your score in half or by 4 or 10, The computer would ask you to solve the problem and if you didn't, there would be an extra penalty
Different classes that your character can be include swordsman, knight, archer, healer, wizard, and hunter. The classes are just for fun and give you different abilities. Different classes get different weapons. (just for fun) Hunters and archers can use bows and arrows. Knights and swordsmen use great swords and swords and shields. Wizards and healers use staffs.
The money would be used for new equipment, potions, armor, weapons, and improvements to items.

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Re:Math game design: multiplication we love

Posted by DrewBlay - 2010/07/07 15:34

If you want examples for math games you can get it here freely.
To the main site: Math Games
For example of subjects in the site: Probability Games
3rd grade Times Tables Games
Interactive Place Value Games
comparing numbers free games online

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