

Himar Bravo



What do we understand by progression in RPGs?

- Rules or game mechanics that influence the evolution of different elements



Diablo III (2012)

O1

O2

O3

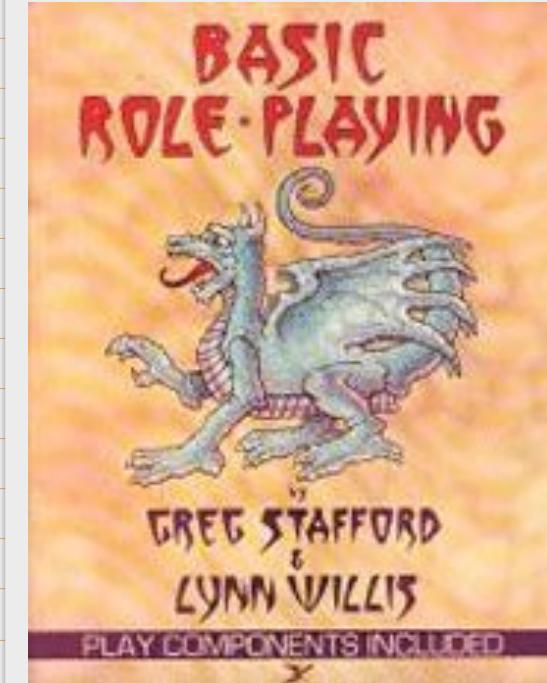
O4

Basic Role-Playing system

Rules system of RuneQuest (1978)

Based on stats:

- Size
- Strength
- Dexterity
- Constitution
- Intelligence
- Power
- Aspect
- Carism



O1

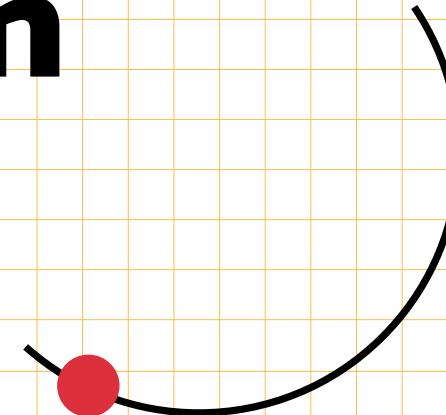
O2

O3

O4



Progression types



O1

O2

O3

O4



Who progresses?



Player

Skill and knowledge



Character

Stats and power



Game

Levels, areas and difficulty



01

02

03

04



How it progresses?



Positive



Negative



01

02

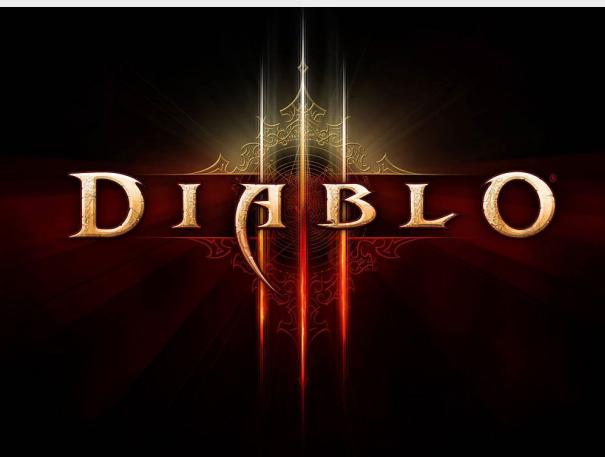
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EXAMPLE

Positive progress (the mostly)

Diablo III (2012)



Pokémon (1999)



01

02

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04

Final Fantasy VII
(1997)



EXAMPLE

Negative progress



Wizardry VI(1990)



Might and Magic VIII(2000)

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01

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Grind

grind *n*

figurative, informal (monotonous work, routine)

rutina *nf*

trabajo monótono *nm + adj*

- Repeat the same task many times to improve the gameplay
- Reasons:
 - Want to level up
 - In some cases, repeating the same task relaxes
 - Need to keep moving forward



01

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BAD EXAMPLE

Inazuma Eleven (2008)

- Random friendly games
- Like Pokemon, but everywhere



O1

O2

O3

O4

GOOD EXAMPLE

Inazuma Eleven Go (2011)

- A few random friendly games
- Voluntary friendly games

Gimnasio (exterior)



1



Pachanga
Ultratradores
www.guiasnintendo.com

Martin Cham Rex Kicker Proundler

Niv. equipo 1

Nombre del equipo: Ultratradores
Miembros: Martin, Cham, Rex, Kicker, Proundler.
Versión: Llamarada.



Pachanga
Superpatadones
www.guiasnintendo.com

Gabe Cham Rex Kicker Proundler

Niv. equipo 1

Nombre del equipo: Superpatadones
Miembros: Gabe, Cham, Rex, Kicker, Proundler.
Versión: Trueno.

2



Pachanga
Aéreos
www.guiasnintendo.com

Cobie Dai Pinkie Jokar Carter

Niv. equipo 1

Nombre del equipo: Aéreos
Miembros: Cobie, Dai, Pinkie, Jokar, Carter.
Recompensas: Deberes de segundo.
Versión: Todas.

3



Pachanga
Rock and Gol
www.guiasnintendo.com

Tish Mo Trixie Abby Stace

Niv. equipo 1

Nombre del equipo: Rock and Gol
Miembros: Tish, Mo, Trixie, Abby, Stace.
Recompensas: Deberes de tercero, Refresco.
Versión: Todas.

01

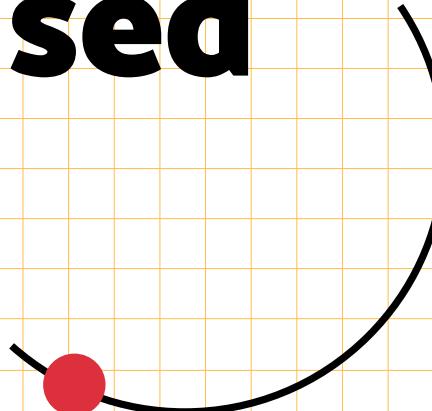
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04



RPG Level-Based Progression



O1

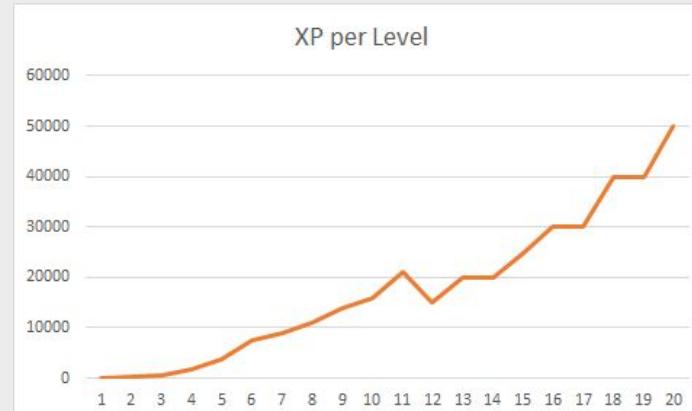
O2

O3

O4

Why using this?

- More direct and explicit way to give the player the feeling of progression
- Motivate the player to keep playing to get the maximum level



O1

O2

O3

O4

...

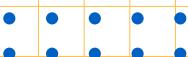


Experience curves



Linear

Each level needs the same extra amount of experience



Exponential

The higher the level, the more experience is needed, therefore, the more it will cost to climb



Logarithmic

Unlike the exponential, the more we play the easier it will be to level up



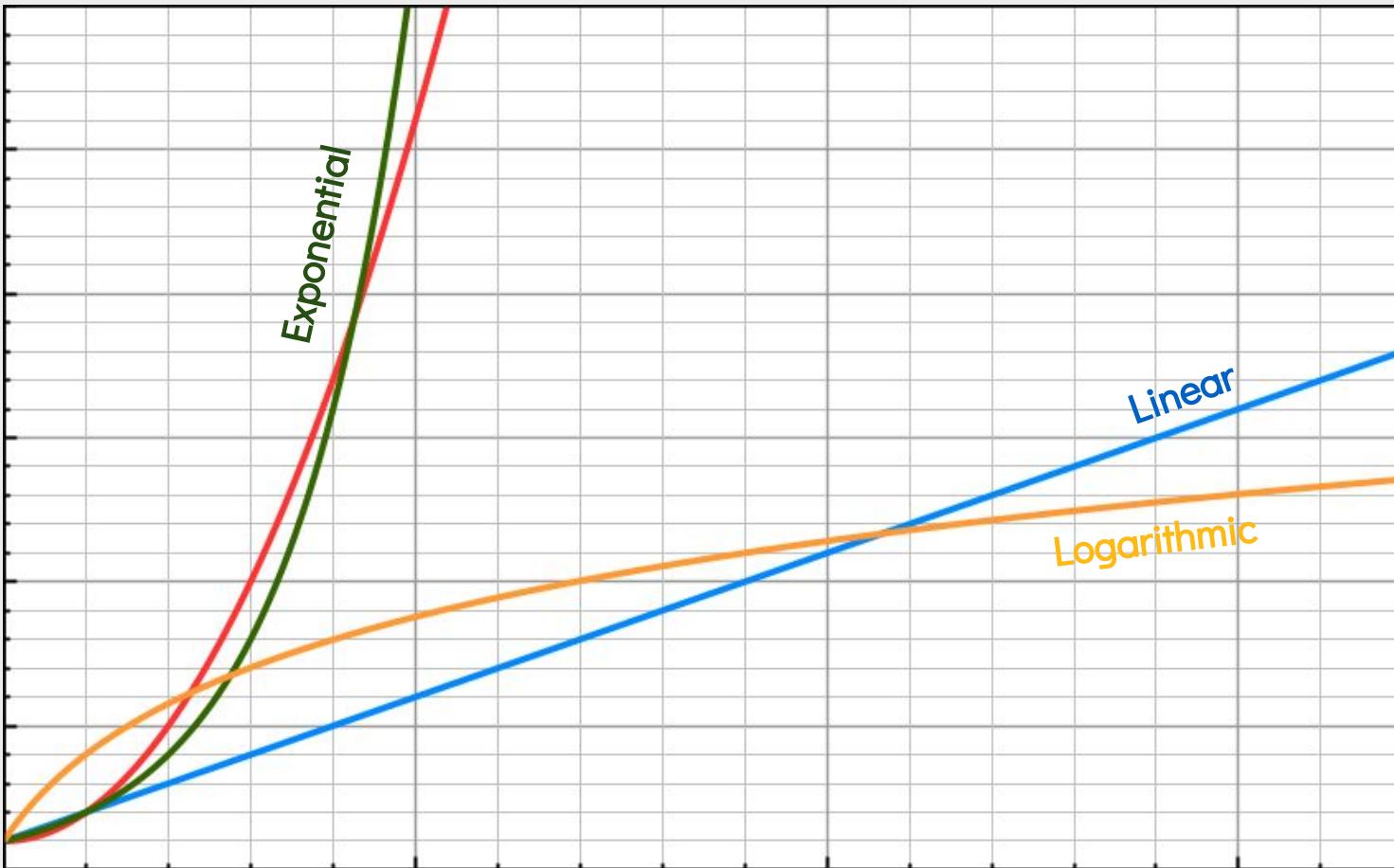
01

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EXP



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O1

O2

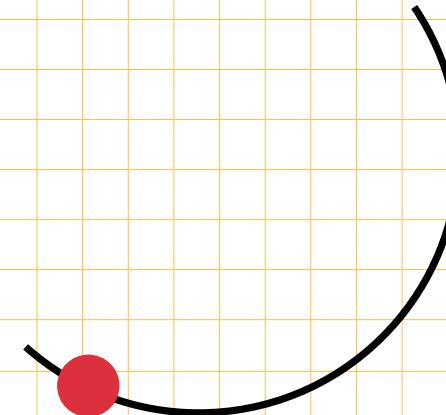
O3

O4

LVL



Real Examples



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O1

O2

O3

O4





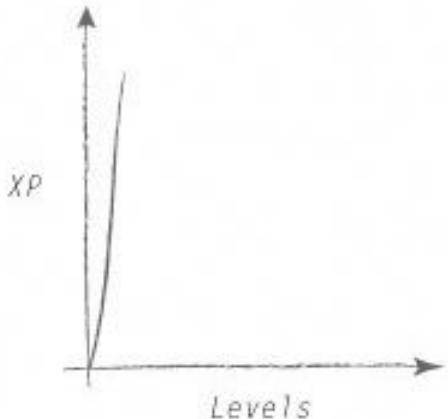
01

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03

04

ORIGINAL DUNGEONS & DRAGONS



Levels	XP
1	0
2	1000
3	3000
4	6000
5	10000

```
function nextLevel(level)
    return 500 * (level ^ 2) - (500 * level)
end
```



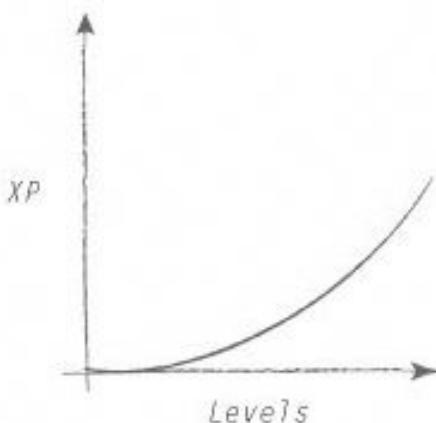
01

02

03

04

POKEMON GENERATION I



Levels	XP
1	1
2	2
3	26
4	51
5	100

```
function nextLevel(level)
    return round((4 * (level ^ 3)) / 5)
end
```



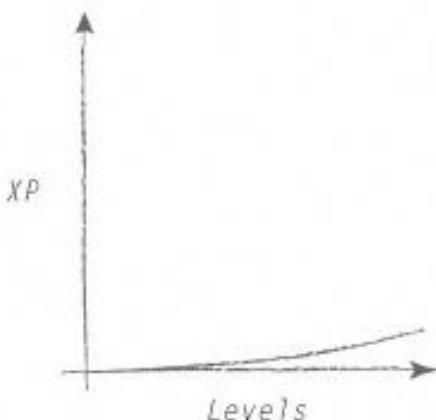
01

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DISGEA



Levels	XP
1	3
2	8
3	14
4	23
5	35

```
function nextLevel(level)
    return round( 0.04 * (level ^ 3) + 0.8 * (level ^ 2) + 2 * level)
end
```

Skyrim - Overview

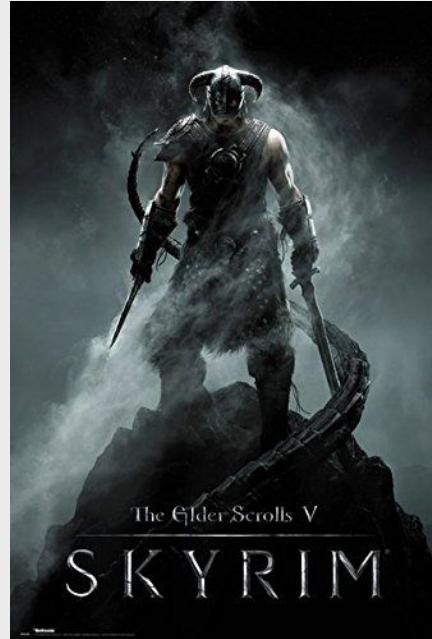
- Leveling up the individual skills
- To level up individual skills you must use them
- No experience is given for killing enemies or completing quests

Pros:

- Good for systems that want to stimulate mastery in all different desired actions to reach max level

Cons:

- Might be limiting character progression in desired skill set



Skyrim (2011)



01

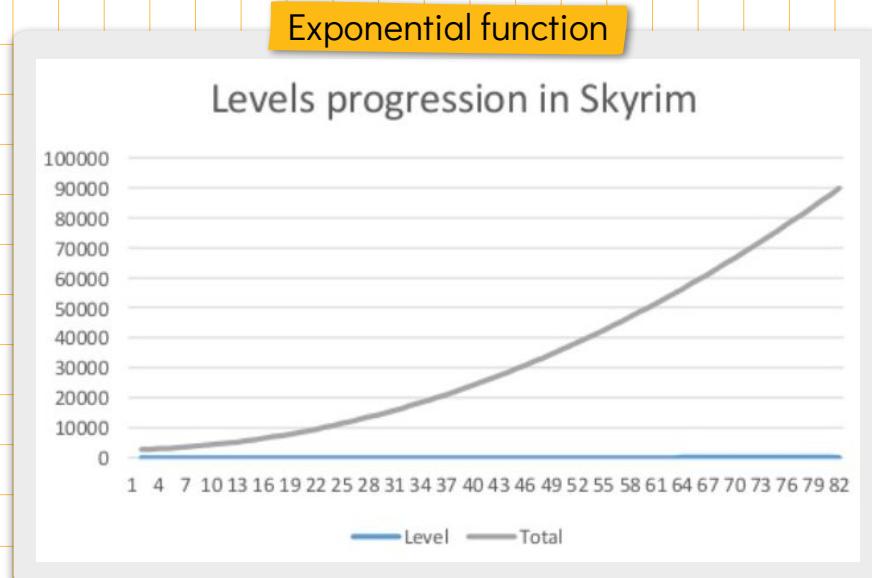
02

03

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Skyrim - Player

- Function:
 $\Delta = (\text{Level} * 25) + 75$
- Formula to go from level 1 to level N:
 $N = 12.5 * N^2 + 62.5 * N - 75$
- Example:
Level 1 -> 2 : 100 xp
Level 49 -> 50 : 1300 xp



O1

O2

O3

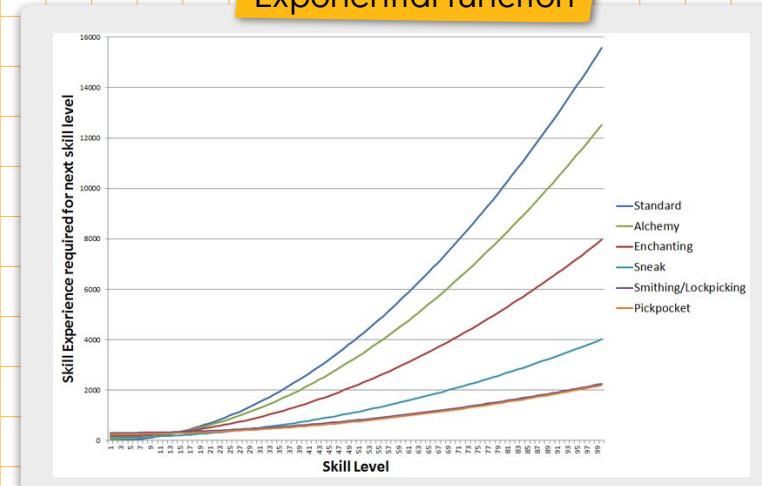
O4

Skyrim - Skills

- At the beginning: 1 skill at rank 25, 5 skills at 20, and 12 at 15
- Total: **18 skills**
- Formula:
 $\text{Delta} = \text{Skill Mult} * (\text{level} - 1)^{1.95} + \text{Skill Offset}$

Total EXP:

- Level 1:
 $1*(25*26/2) + 5*(20*21/2) + 12*(15*16/2) = 2,815$
- Level 81 (maximum):
 $18*(100*101/2) = 90,900$



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04



01

02

03

A detailed character portrait of Xaxxus, a Nord warrior, set against a background of a nebula or star field. The character is shown from the waist up, wearing heavy armor and holding a two-handed sword. He has a beard and is looking slightly to the right. The portrait is framed by decorative arrows at the top.

NAME Xaxxus

LEVEL 252

RACE Nord

Space Legendary



O1

O2

O3

O4

SMITHING 100

HEAVY ARMOR 100

BLOCK 100

TWO-HANDED 100

ONE-HANDED 100

ARCHERY 100

LIGHT ARMOR 100



11

The art of combat using two-handed weapons, such as greatswords, battle axes, and warhammers. Those trained in this skill deliver deadlier blows.

MAGICKA 950/950

HEALTH 930/930

STAMINA 930/930



Diablo II - Overview

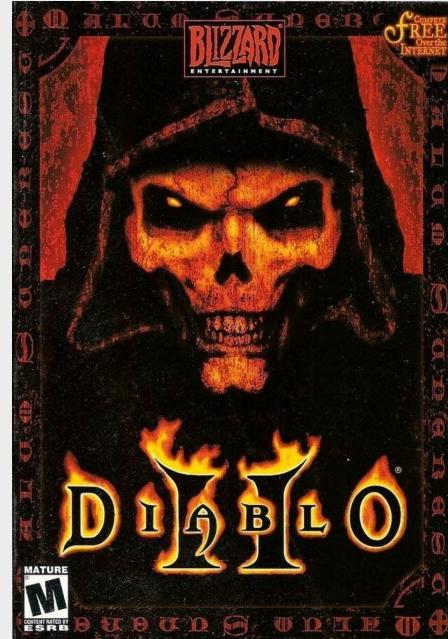
- Experience gained from killing monsters

It depends on several factors:

- Difficulty level
- Monster type
- Character level
- Number of characters in the game, the group or the area, ...

There is no exact formula:

- **Level 1-10:** Reasonable numbers chosen by hand
- **Level 11-27:** 1.25x more than the previous
- **Level 28+:** 1.09x more than the previous



Diablo II (2000)



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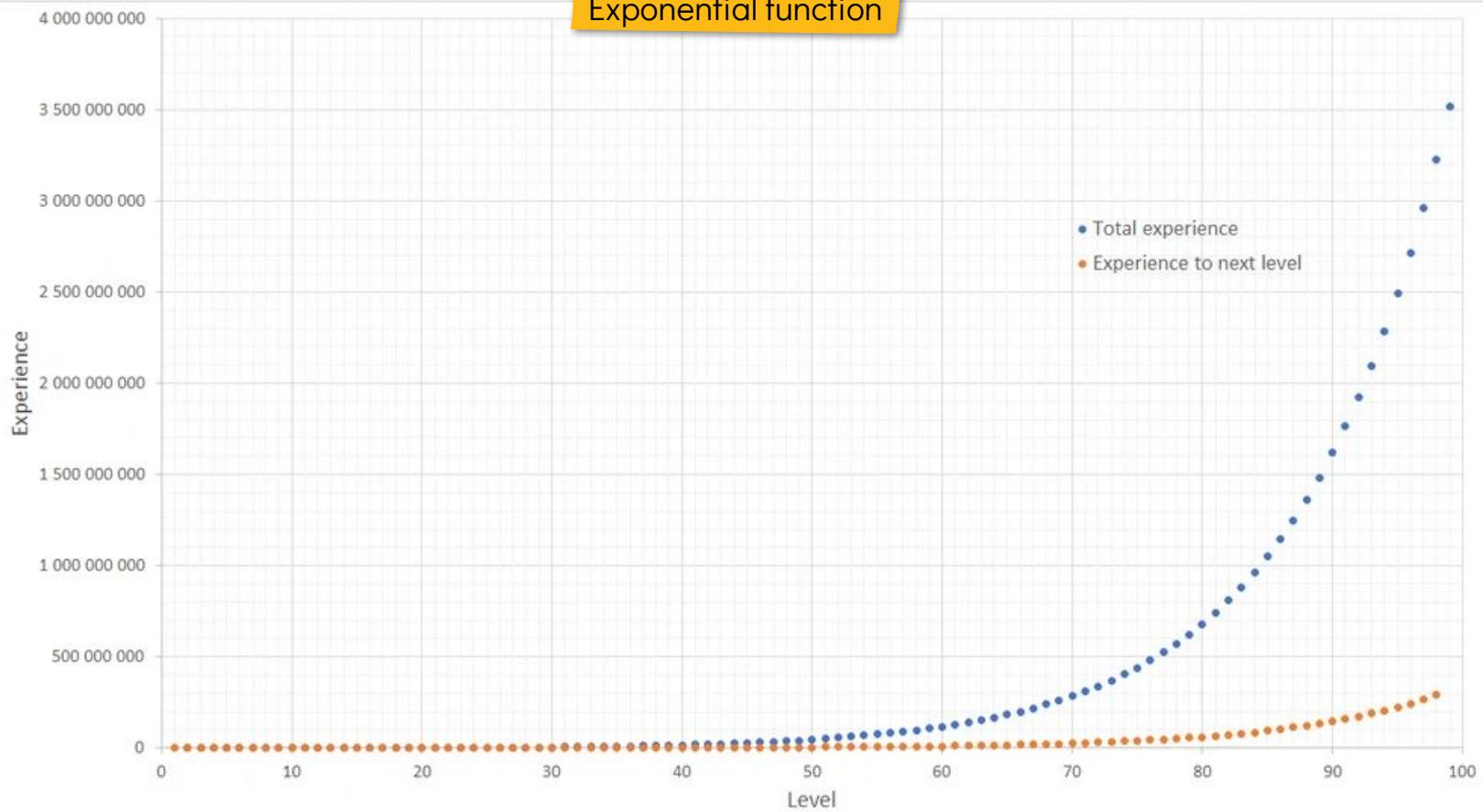
O1

O2

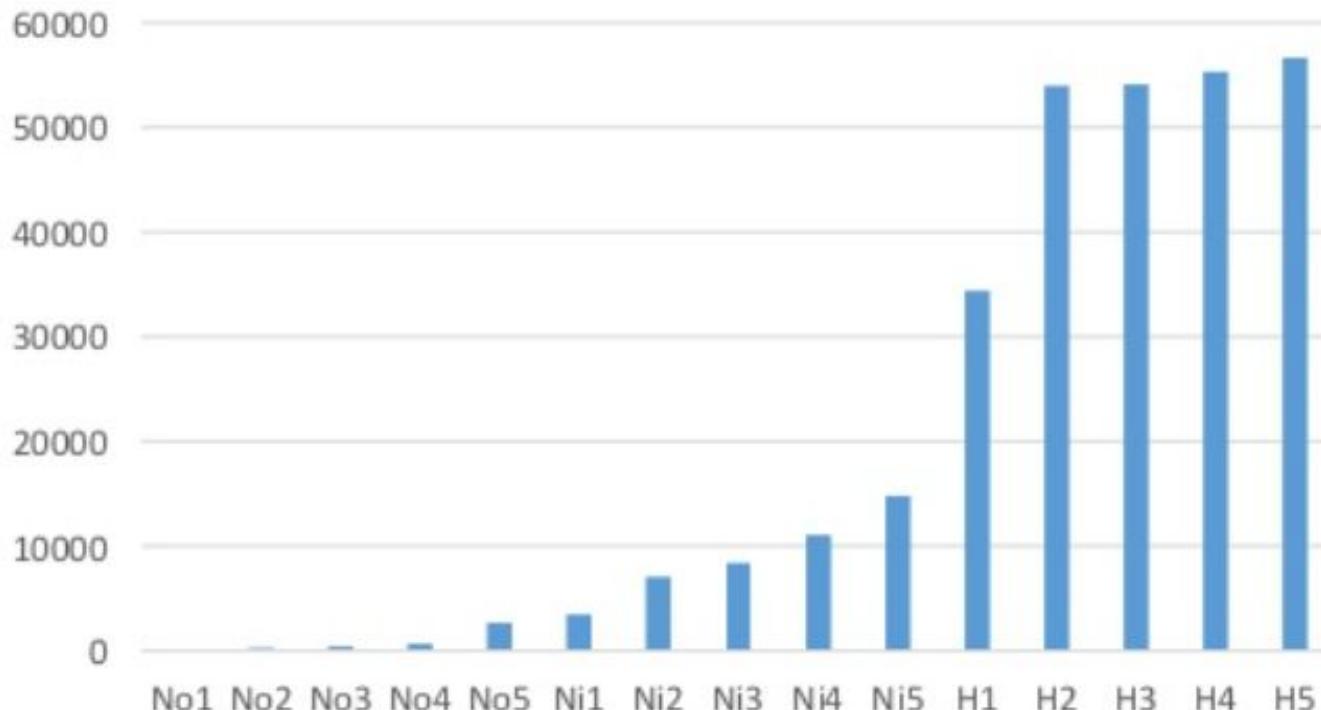
O3

O4

Exponential function



Average amount of experience per monster killed

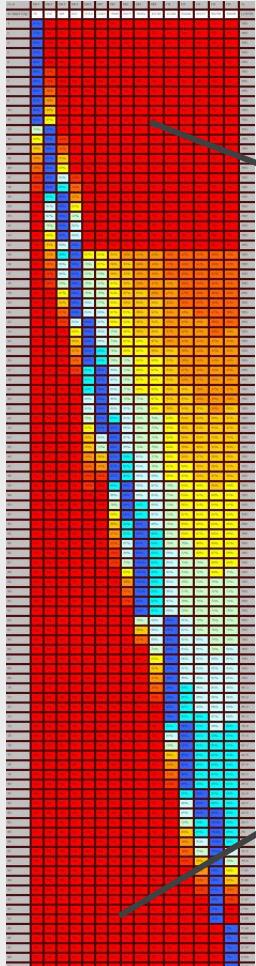


O1

O2

O3

O4



CLvl	No1	No2	No3	No4	No5	Ni1	Ni2	Ni3	Ni4	Ni5	H1	H2	H3	H4	H5	%
Av Base Exp	78	219	391	647	2740	3463	7009	8471	11053	14748	34364	53949	54147	55251	56680	Lvl Pen
1	67%	8%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
2	77%	9%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
3	85%	11%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
4	91%	13%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
5	96%	16%	6%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
6	98%	22%	7%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
7	98%	29%	10%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
8	96%	39%	12%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100
9	93%	48%	13%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100

91	5%	5%	5%	5%	5%	5%	5%	5%	5%	7%	10%	23%	57%	36%	4.49
92	5%	5%	5%	5%	5%	5%	5%	5%	5%	6%	8%	16%	38%	24%	3.42
93	5%	5%	5%	5%	5%	5%	5%	5%	5%	6%	6%	11%	24%	15%	2.54
94	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	7%	12%	10%	1.95
95	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	6%	5%	7%	1.46
96	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	6%	5%	7%	1.07
97	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	7%	0.78
98	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	7%	0.59
99	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	7%	0.49

Experience gain depending on level, act, and difficulty

O1

O2

O3

O4

Path of Exile - Overview

- Very similar to Diablo III:
- Battle monsters and fulfill quests to gain XP and equipment
- Unique skill points distribution system
- Different starting location on the passive skill tree
- Different amount of attributes in level 1



Path of Exile (2013)



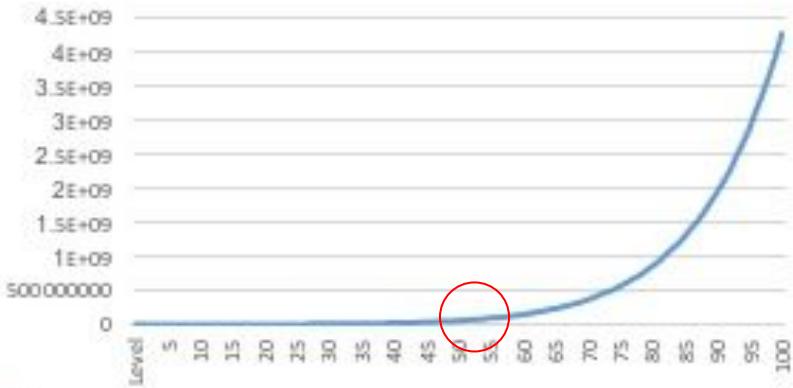
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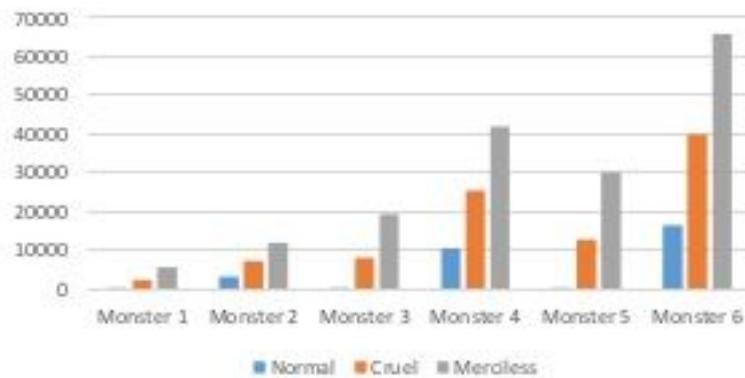
Levels progression in Path of exile



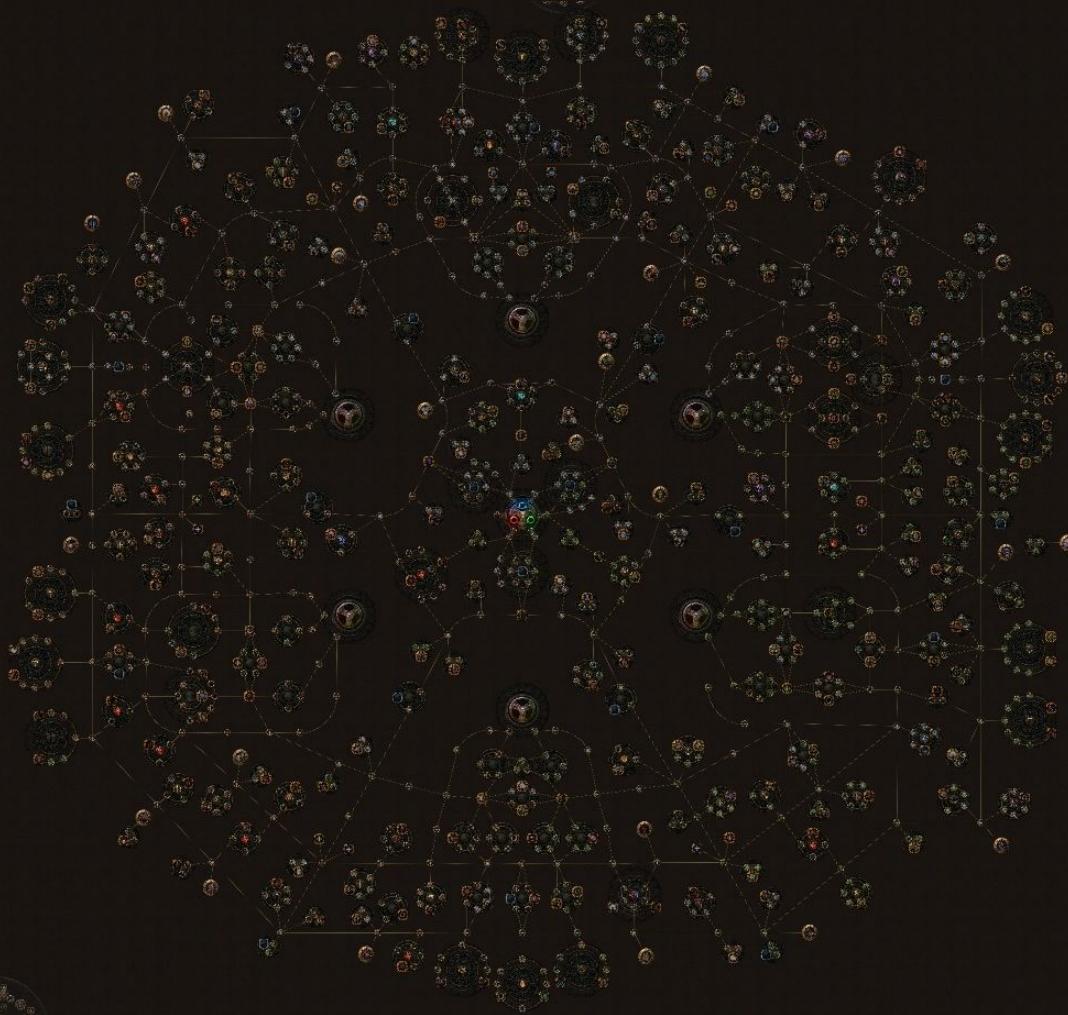
Levels and skill points:

- Max Level 100
- Max skill points 120-123 (depending on quests chosen)
- **1325 skills** that provide passive bonuses

Monster XP according to difficulty



Skill Point System



01

02

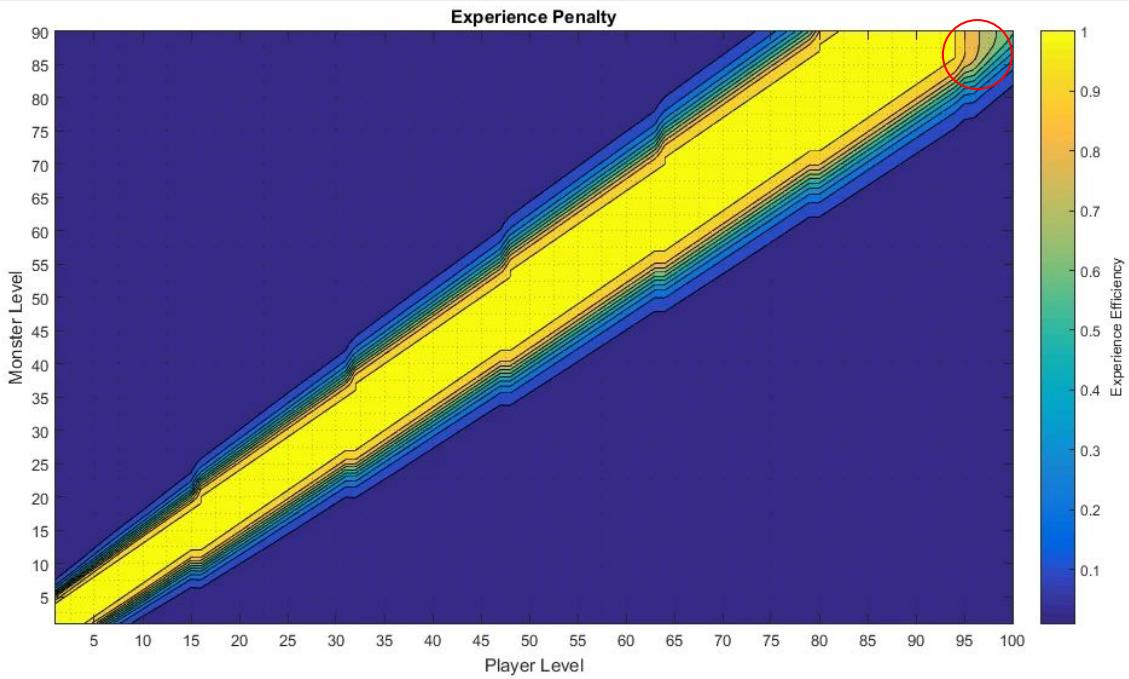
03

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The player suffers a **penalty to experience** gained if the player is too far above or below the monster's level

There is a safe level range where no penalty is applied:

$$\text{SafeZone} = [3 + \text{PlayerLevel} / 16]$$



01

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Who progresses?



Player

Skill and knowledge



Character

Stats and power



Game

Levels, areas and difficulty



01

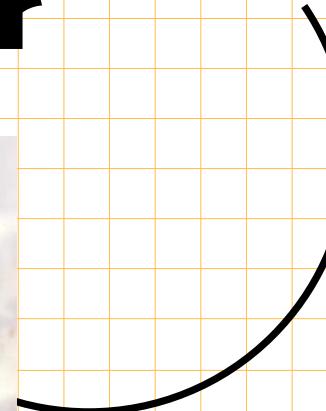
02

03

04



**Now, think about
how to balance your
game**



O1

O2

O3

O4



Know your audience

- Rule #1: Not everyone will like it

Type of gamers:

- **Casual:** +progression -challenge
- **Hardcore Junkie:** +challenge -progression
- **Math Nerd:** ++grinding
- **The rest:** challenged at critical turning points



O1

O2

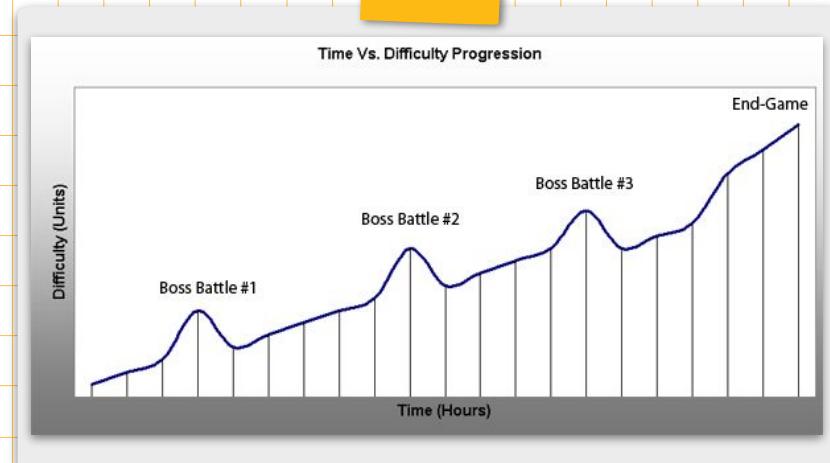
O3

O4

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Then, ask yourself:

- Should the player be able to beat the game without doing any optional side-quests or non-progression related grinding?
- How many bosses will the game have, and how spaced out will they be?
- How many dungeons will be on display, and how big is each dungeon?



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01

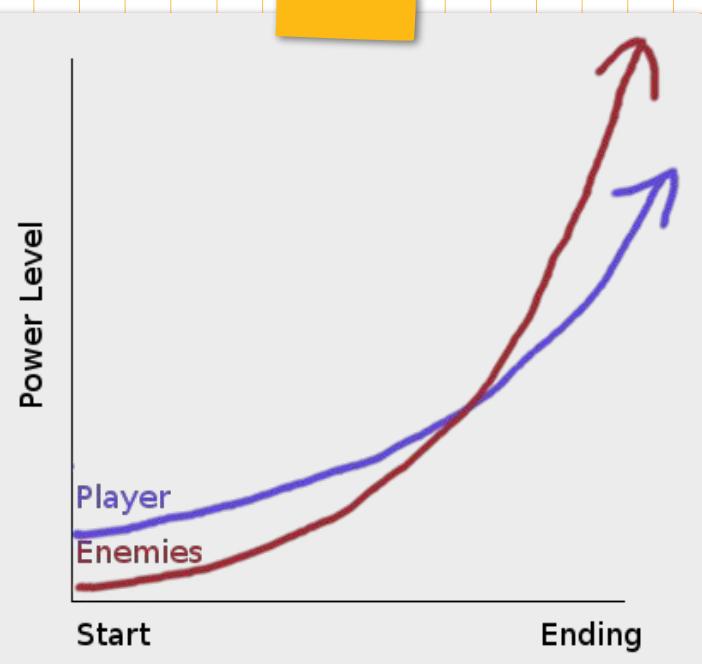
02

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Create balanced enemies

- Don't make them too strong or too weak
- Test, test, and..... TEST
- Enemies never will be balanced at the start of development



O1

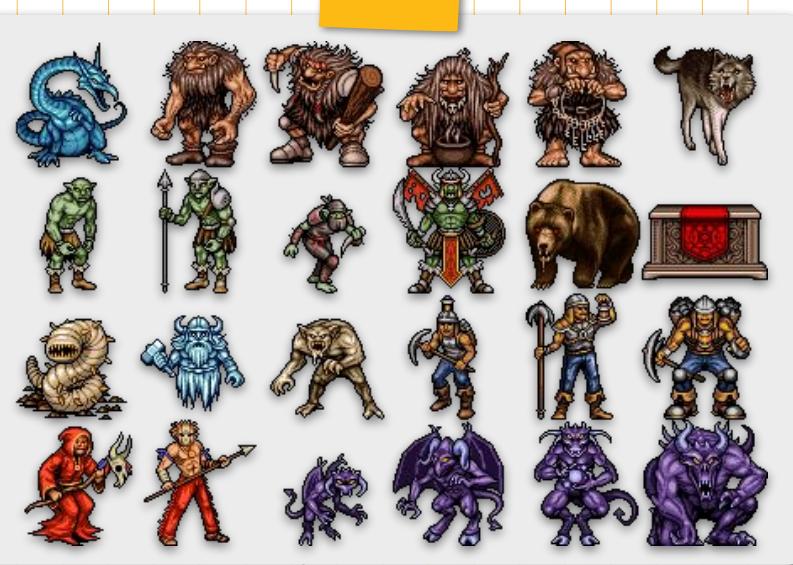
O2

O3

O4

Normal Enemy example

- **HP** : Double the player's health
- **MP** : If it's a magic user, give the same amount or double the enemies health. If it isn't a magic user, half of the enemies health
- **ATK**: Around 30% less than the player's attack. If it is a magic user, I recommend half the player's attack
- **DEF**: Same as the player



01

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Dungeon Enemy example

- **HP** : Triple the player's health
- **MP** : If it's a magic user, give the same amount or double the enemies health. If it isn't a magic user, half of the enemies health
- **ATK**: Same as the player, or one point higher. If it is a magic user, around 30% higher than the player's attack
- **DEF**: Around 10% higher



O1

O2

O3

O4

Boss example

- HP : 5 times higher than the player's
- **For All the Rest:** Times it by 1.5 higher (Or 150%) than the player's
- Give to the player a lot of gold or big rewards



O1

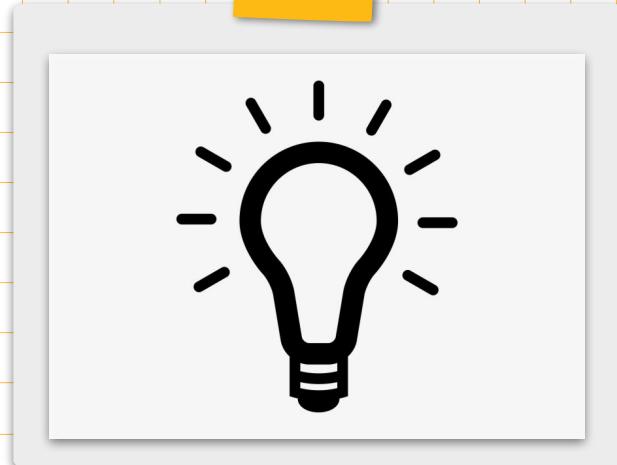
O2

O3

O4

Some advices

- Rather than banning powers, find ways to tune them, and bring them in line with the metagame
- Think in hard numbers and stick to them. No player should be able to do more than X damage per turn at level Y
- Ensure that every character build has a counter



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Thank you for your attention!

Any questions?



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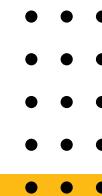


01

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O1

O2

O3

O4

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O1

O2

O3

O4