How Damage is Calculated in Tactics Ogre: Reborn

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The following is a breakdown of how damage is calculated in **Tactics Ogre: Reborn**. This is based off of Asvel's datamine as well as comments/testing/feedback from /u/Rucession and /u/sapphiredragoon0. Any errors are my own.

I. The Math

Here's the simplified, TLDR of the formula for people who don't want to remember the specific numbers and just wants to get a "general feel" of how the numbers interact:

> Damage = **(Attacker's Base Stats - Defender's Base Stats)** + (Attacker's Weapon ATK - Defender's Equipment DEF)

For the bolded section, we'll call this the **Stat Overhead**.

However, there's more to it than that, hence the breakdown below.

A More Complex Formula

For those who are looking for more specific details, below is a breakdown of the Base Stats.

> Damage = **((Attacker's STR + DEX/INT+MND) - (Defender's STR + VIT/MND+RES))** + (Attacker's Weapon ATK - Defender's Equipment DEF)

The bolded part is still the **Stat Overhead**, although we've broken it down into its component aspects.

To distinguish **Stat Overhead** from the non-Stat Overhead section of the formula, any adjustments to the former will use the term **modifier**, while the latter will use **multiplier**.

The **Stat Overhead** is affected by the following factors:

- **Affinity**
- **Action (Elements)**

These factors will be discussed under **II. Affinities and Elements** section. But the basic summary is that these can apply either a +30% bonus or a -10% penalty modifier, depending on the defender's **Affinity**.

The non-bolded part of the formula is affected by **Elemental Compatibility**. These factors are also discussed under **II. Affinities and Elements**. These can apply either a 10% bonus or a -30% penalty multiplier, depending on the character's **Affinity**.

These can be further broken down as follows (but to reiterate, the formula below is still an oversimplification as each weapon, finisher, and spell has its own specific formula):

> **((100 + Affinity Adjustments + Elements Adjustments + Attacker's Attack Modifiers - Defender's Resistance Modifiers)% x (Attacker's Attribute Values - Defender's Attribute Values))** + [((Attacker's Action Values + Attacker's Equipment Values) x (Elemental Compatibility Adjustments)) - (Defender's Equipment Values)].

The bolded part is still part of the **Stat Overhead**.

Below is a breakdown of some of the terms used in the formula.

- A weapon's damage type bonus (e.g. 20 crushing) would apply to the **Attacker's Attack Modifiers**.
- A weapon's elemental type bonus (e.g. 20 fire) would apply to the **Attacker's Attack Modifier** *if* the weapon's element is strong against the defender's **Affinity** (see **II. Affinities and Elements** section below).
- A weapon's racial bonus would apply to the **Attacker's Attack Modifiers** while an equipment's racial defense bonus applies to the **Defenders Resistance Modifiers**.
- Under **Defender's Equipment Values**, the defender would also apply their innate DEF value, which is determined by their class and level. (**Update:** Rucession is working on a table for this, of which the WIP is available here.) Against spells, instead of using the character's innate DEF value, their unit level x 1.5 is used instead (this is discussed in more detail under **V. Spells**).

Known bugs: When it comes to **Defender's Resistance Modifiers**, normally an attacker's weapon damage type should be used to check which of the defender's resistance values to use. For example, an attacker's slashing weapon should use the defender's slashing defense, an attacker's crushing weapon should use the defender's crushing defense, etc.

The bug is that for defenders, instead of using the corresponding defense values, the defense value used is dependent on the weapon used in the **defender's primary hand**. For example, if the defender is wielding a hammer in their primary hand (crushing damage), their crushing resistance will always be used regardless if they are attacked by crushing, piercing, or slashing weapons. Players can abuse this by just focusing on one damage resistance type (e.g. crushing resistance for characters wielding crushing weapons).

II. Affinities and Elements

You can skip this part if you do not want to factor in **Affinity**, **Elemental Compatibility**, and **Actions (Elements)**.

Affinity

The first modifier is **Affinity**.

This is determined by the character's element.

If the attacker's element is strong against the defender's element, they gain a 1.3 modifier bonus to the **Stat Overhead**.

If the attacker's element is weak against the defender's element, they gain a 0.9 modifier penalty to the **Stat Overhead**.

Elemental Compatibility

Elemental Compatibility is the term we'll use to check whether the action (basic attack/finisher/spell) matches the character's Affinity.

This will provide either a multiplier bonus or a multiplier penalty to the attacker's Weapon ATK.

Actions (Elements) vs Unit Affinity

The various actions a unit can take (basic attack/finisher/spell) can contain **Elements** that are identical or different from the character's Affinity, and affect the damage calculation. This is independent from **Affinity** (so these two mechanics stack).

Basic Attack vs Unit Affinity

If the attacker's **weapon** Element is strong against the defender's Affinity, apply the weapon's elemental damage value as a percentage modifier to the **Stat Overhead**. (For example, if the defender is ice, a weapon with 20 fire would increase the **Stat Overhead** by 20%.)

Basic Attack Elemental Compatibility

- If the attacker's weapon Element matches the attacker's Affinity, apply a 1.1 multiplier to the Attacker's Weapon ATK. (For example, if both the weapon and the character are fire, and the weapon's attack value is 100, apply a 1.1 multiplier to 100 for a total of 110.)
- If the attacker's weapon Element is strong against the attacker's Affinity, apply a 0.7 multiplier to the Attacker's Weapon ATK. (For example, if the weapon is water and the character is fire, and the weapon's attack value is 100, apply a 0.7 multiplier for a total of 70.)

Finisher vs Unit Affinity

If the attacker's **Finisher** Element is strong against the defender's Affinity, apply a 100% percentage modifier to the **Stat Overhead**. This is not applicable to Dark Knight unique finishers (e.g. Ozma's **Demon Rose**). (For example, if the Finisher is fire, and the defender is ice, the **Stat Overhead** would increase by 100%.)

Finisher Attack Elemental Compatibility

- If the attacker's Finisher Element matches the attacker's Affinity, apply a 1.1 multiplier to the Attacker's Weapon ATK and Finisher. (For example, if both the Finisher and the character are fire, and the weapon's attack value is 100, apply a 1.1 multiplier to 100 for a total of 110. If the finisher's additional damage is 100, also apply a 1.1 multiplier to 100, for a total of 110 damage, in addition to the damage from the weapon attack, for a total of 220 damage vs. the initial 200.)
- If the attacker's Finisher Element is strong against the attacker's Affinity, apply a 0.7 multiplier to the Attacker's Weapon ATK and Finisher. (For example, if the Finisher is water and the character is fire, and the weapon's attack value is 100, apply a 0.7 multiplier for a total of 70. If the finisher's additional damage is 100, also apply a 0.7 multiplier to 100, for a total of 70 damage, in addition to the damage from the weapon attack, for a total of 140 damage vs. the initial 200.)

Spell vs Unit Affinity

If the **spell's** Element is strong against the defender's Affinity, apply the weapon's elemental damage (regardless if it matches the spell's Element or not) as a percentage modifier to the **Stat Overhead**. (For example, if the defender is ice, and the spell used is fire, and the weapon has an elemental value of 20–regardless if it's ice or fire or some other element–the **Stat Overhead** would increase by 20%.)

Spell Elemental Compatibility

- If the attacker's spell element matches the attacker's Affinity, apply a 1.4 multiplier to the spell's Action Value. (For example, if both the spell and the character are fire, and the Action Value of the spell is 25, apply a 1.4 multiplier to 25 for a total of 35.)
- If the attacker's spell element is strong against the attacker's Affinity, apply a 0.5 multiplier to the spell's Action Value. (For example, if the spell is water and the character is fire, and the Action Value of the spell is 25, apply a 0.5 multiplier for a total of 12.5.)

Known bugs: Currently, spellcasters don't get to apply any bonuses (including elemental damage bonuses) from their weapon *if* they are either wielding a two-handed weapon or wielding a one-handed weapon and nothing in the offhand.

This is circumvented by having another item (e.g. shields) equipped on the offhand (bonuses on the offhand will not apply). For RT-saving (and AI team builds) purposes, consider using a generic Cursed Dagger (i.e. no units sacrificed to modify the weapon) on the offhand.

Elemental Resistances

Elemental resistances apply their bonuses as a percentage modifier to the **Stat Overhead** in the following **Affinity** scenarios (that we know of):

- If the attacker's **Action** element is strong against the defender's **Affinity**, the defender's Elemental Resistance that will apply is the element that is strong against the former's element (i.e. it will check the defender's equipment for which element to best use). This cannot reduce the attacker's modifier bonus to below 0 (i.e. if the elemental resistance > the damage bonus, this will reduce the damage bonus to 0).
- If the attacker's **Action** element is weak against the defender's **Affinity**, the defender's Elemental Resistance that will apply is the element that matches the defender's Affinity.

III. Weapon Basic Attacks

Below is a breakdown of the stats and modifiers to use in our damage formula.

The **Equipment Multiplier** would apply to the non-bolded part, so the equation would look something like this:

Damage = **((Attacker's STR + DEX) - (Defender's STR + VIT))** + ((Attacker's Weapon ATK x Equipment Multiplier) - (Defender's Equipment DEF x Equipment Multiplier))

Here's a concrete example for **daggers**:

Damage = **((Attacker's 1.5 STR + 1.6 DEX) - (Defender's 1.0 STR + 1.0 VIT))** + ((Attacker's Weapon ATK x 1.2) - (Defender's Equipment DEF x 1.0))

For bows, the formula would be (and why it deals less damage to heavily armored units despite characters having relatively good stats):

Damage = **((Attacker's 1.3 STR + 1.7 DEX) - (Defender's 0.7 STR + 1.0 VIT))** + ((Attacker's Weapon ATK x 2.5) - (Defender's Equipment DEF x 2.5))

Weapon	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
• 1H Sword • 1H Axe • 1H Hammer • 1H Spellbook • 1H Musical Instrument • Shield	1.8 STR + 1.3 DEX	0.7 STR + 1.0 VIT	1.0	1.0
• Fist • 2H Sword • 2H Axe • Spears • 2H Hammer • 2H Katana • Whip • 2H Spellbook • 2H Musical Instrument • Boreas • Cleric Cudgel • Cursed Cudgel	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
• Dagger • 1H Katana	1.5 STR + 1.6 DEX	1.0 STR + 1.0 VIT	1.2	1.0

● Cudgel	1.0 STR + 0.6 DEX	0.7 STR + 1.0 VIT	1.0	1.0
● Blowgun ● Bow ● Crossbow ● Fusil	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5

IV. Finishers

Finishers with **Elements** are bolded (e.g. **Flaming Fists**).

From the list below, I've omitted unique Finishers.

To reiterate what's mentioned in the **II. Affinities And Elements** section, **Finishers** with an Element will modify the **Stats Overhead** by 100% if the Finisher Element is strong against the defender's Affinity.

Here's an example of the damage formula for **Flaming Fists**:

Damage = **((Attacker's 1.8 STR + 1.4 DEX) - (Defender's 0.7 STR + 1.0 VIT))** + (100 + (Attacker's Weapon ATK x 1.0) - (Defender's Equipment DEF x 1.0))

Fists

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Flaming Fists	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Rapid Strike	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Howling Rage	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Retribution	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Daggers

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Heart Crusher	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Shadowpin	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Double Fang	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Overwhelm	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Swords

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Rending Gale	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Vile Wound	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Chery Ronde	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Papillion Reel	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Greatswords

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Sonic Blade	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Lightning Strike	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Cyclone Saber	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Grand Cross	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Axes

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Ice Prison	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Mistral Edge	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Mantis Strike	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Infinity	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Spears

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Ruination	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Scythe Wind	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Giga Tempest	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Spiral Scourge	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Hammers

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Tyrant's Mace	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Gaia Sunder	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Crimson Reach	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Dancing Sprite	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

1H Katanas

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Dark Blade	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Thunder Wave	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Swallow Slash	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Advent Sign	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

2H Katanas

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Skyrend	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Stonebloom	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Sunblossom	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Ghostwall	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Cudgels

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Wrathful Strike	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Raining Blows	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Pressure Whirl	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Trinity Pulse	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Whips

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Flood Lash	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Wrenching Coil	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Swift Thrash	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Armageddon	300	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Demon Rose	70	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Spellbooks

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Disembrain	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Raging Pummel	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Eviscerate	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Devastate	250	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Instruments

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Aggressive Rendition	0	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Harmonic Blast	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Torrential Rhapsody	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0
Forced Fermata	100	1.8 STR + 1.4 DEX	0.7 STR + 1.0 VIT	1.0	1.0

Blowguns

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Frigid Blast	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Scorpion Shot	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Venom Sting	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Heaven's Scorn	250	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5

Bows

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Dark Weight	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Slumber Shot	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Flaming Blast	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Empyreal Shot	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5

Crossbows

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Dullbind	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Brimstone Hail	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Sanctus Flare	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Deathwall	250	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5

Fusils

Finisher	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Mirage Strike	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Rapid Blast	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Atonement	100	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5
Scatter Shot	0	1.3 STR + 1.7 DEX	0.7 STR + 1.0 VIT	2.5	2.5

V. Spells

Spells use a slightly different formula.

Equipment Multipliers

Attacker's Equipment Multiplier is 0, while Defender's Equipment Multiplier is 0.5.

Here's an example for Deadshot:

> **Damage = ((Attacker's 1.5 INT + 1.1 MIND) - (Defender's 0.7 MND + 1.0 RES))** + ((25 x (Elemental Compatibility Adjustments)) - Defender's Equipment DEF x 0.5))

To further break down the **Defender's Equipment DEF x 0.5** part, the actual formula used is the following:

> [((Equipment DEF + (unit level x 1.5)) x 0.5]

Damage Chart

Direct Spells

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Direct Spells I	25	1.5 INT + 1.1 MND	0.7 MND + 1.0 RES	0	0.5
Direct Spells II	60	1.5 INT + 1.1 MND	0.7 MND + 1.0 RES	0	0.5
Direct Spells III	90	1.5 INT + 1.1 MND	0.7 MND + 1.0 RES	0	0.5
Direct Spells IV	120	1.5 INT + 1.1 MND	0.7 MND + 1.0 RES	0	0.5

Indirect Spells

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Indirect Spells I	40	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Indirect Spells II	70	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Indirect Spells III	55	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Indirect Spells IV	95	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5

Summon

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Summon I	100	1.1 INT + 0.9 MND	0.7 MND + 1.0 RES	0	0.5
Summon II	100	1.1 INT + 0.9 MND	0.7 MND + 1.0 RES	0	0.5

Apocrypha

- For **Aeroflux**, **Supernova**, and **Heavenly Judge** (and their II counterpart), the defender's **Stat Overhead** is modified by the following: (Defender's Height -1) x 2.
- For **Earthquake**, **Abyss**, and **Ice Requiem** (and their II counterpart), the defender's **Stat Overhead** is modified by the following: (33 - Defender's Height) x 2.

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Apocrypha I	115	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Apocrypha II	150	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5

Healing

Healing spells (with the exception of **Healing IV**, which heals by percentage of the target's life) use the following formula to calculate how much it heals:

$$\text{(Caster's MND} \times 0.05) + \text{Action Value.}$$

Healing spells's **Action Value** for healing are different compared to the damage it deals. Healing values are indicated in parenthesis.

If the caster's element is the same element as the action being taken (i.e. Light), the multiplier to MND becomes 0.15.

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Heal I	30 (105)	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Heal II	55 (165)	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Heal III	80 (225)	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Heal IV	105 (N/A)	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Major Heal I	30 (105)	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Major Heal II	?? (165)	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Major Heal III	100 (225)	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5

Draconic

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Draconic I	95	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Draconic II	120	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5

Necromancy

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Life Force	60	1.5 INT + 1.1 MND	0.7 MND + 1.0 RES	0	0.5
Putrify	45	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5
Putrify II	75	1.3 INT + 1.0 MND	0.7 MND + 1.0 RES	0	0.5

Ninjutsu

Spell Type	Action Values	Attacker's Attributes	Defender's Attributes	Attacker's Equipment Multiplier	Defender's Equipment Multiplier
Ninjutsu I	70	1.1 INT + 0.9 MND	0.7 MND + 1.0 RES	0	0.5
Ninjutsu II	70	1.1 INT + 0.9 MND	0.7 MND + 1.0 RES	0	0.5

VI. Miscellaneous

Below are various miscellaneous information.

Instill Elements

In general, the **Instill Elements** spell provides two buffs:

Attuned grants resistance (15%) to its corresponding Element (e.g. fire attuned grants fire resistance).

Touched grants a bonus (25%) second attack damage (that does not change the weapon's Element type).

"Elemental" Armors

The tooltips from various elemental armors are erroneous. They do not provide a bonus to damage. (The tooltips were taken from **Tactics Ogre: Wheel of Fortune**, which had different mechanics.)

Weapon Skill Ranks

For both physical attacks and spells, each weapon rank adds 0.6 to the **Stat Overhead** values of the attacker's attributes (i.e. the STR + DEX or INT + MND part). This is capped at 90 ranks (54 total).

Weapon skill ranks also contribute to the defender's "Toughness" stat (STR+VIT or MIND+RES) by 0.1 points per weapon skill rank if they are being attacked by an enemy using that weapon. This is capped at 90 ranks (9 total).

For example, if the defender has the dagger skill equipped, and they are attacked by a dagger user, they will get the minor defense bonus.

This applies to spells as well if the attacking spellcaster has the same weapon skill equipped as the defender.

For example, if a spellcaster casts a spell and they are wielding a dagger and have the dagger skill equipped, and the defender has the dagger skill equipped, the latter will receive the benefit.

If the attacker has multiple weapon skills equipped, the defender will only benefit if their corresponding weapon skill matches the attacker's left-most equipped skill.

For example, if a spellcaster casts a spell, and has daggers and cudgels skills equipped in that order, and the defender has the dagger skill equipped, the latter will receive the bonus. However, if the attacker had cudgels and daggers equipped in that order, the same defender would not receive the bonus.

Untranslated Sections

This document did not translate all the damage values in [Asvel's Github](). Some attacks, like those from items and abilities from beasts, are missing here, as I am unable to competently translate them.

Missing Data

We have no data on the following yet:
- Critical Hits
- Effects of Skill Cards

VII. Frequently Asked Questions

Is it better to stack Elemental Affinity/Compatibility (i.e. Unit's element is the same as their weapon and/or Finisher) or is it better to spread them out?

It depends on what you want to achieve.

Stacking **Affinity/ Elemental Compatibility** provides a significant boost against one element, and a consistent, minor bonus everywhere else.

Spreading them out gives you a significant boost against several elements as opposed to just one (or more depending on the amount of finishers with Elements).

Which inflicts a higher penalty, Breach or Fear?

Fear reduces the target's attributes in the **Stat Overhead** section by approximately 15%. It also applies a similar penalty to the target's Defender's Equipment (and Class) value.

Breach increases the attacker's attributes in **Stat Overhead** by 50%.