

The Knight

This test will focus on your ability to create a compelling play experience for a Knight character in an isometric action RPG for mobile devices.

The Knight has the following abilities:

PvE Tank Abilities					
Ability name	Gesture	Damage	Activation Delay	Duration	Cooldown
Basic Attack Combo	Auto Attack	3 / 6 / 9	0.50	0	0
Flaming Ball	Swipe	20	0.25	0	10
Jump Smash	Double Tap	5	0.25	1	5
Whirlwind	Hold self and drag	5 per 0.5 seconds	0.25	3	10

I had sent you the e-mail requesting clarification on the auto-attack, and when I hadn't heard back for a while, I started writing up examples for the auto-attack working two different ways. So, the first two questions will reference both types of auto-attacks. However, since you provided me with the specific answer, question 3 and beyond will use the type related to the answer you provided.

Auto-Attack Type 1

The first type of auto-attack is the type found in games, such as *World of Warcraft*. With this type, the auto-attack is running the entire time that the player is in combat, and even though the animations may not always play, it is continuously doing damage. The cooldowns play over the top of the auto-attack.

Auto-Attack Type 2

The second type of auto-attack is similar to the one implemented in the last game I worked on in which the auto-attack only plays when other abilities are not being used, and it is always represented with an animation.

The type of auto-attack used will actually influence both the sequence of abilities and the resulting DPS. Auto-Attack Type 1, because it is constantly running, will always result in more overall damage.

1. *What sequence of abilities results in the highest amount of damage in the first second of combat?*
 - a. Type 1: Auto-Attack + Flaming Ball
 - b. Type 2: Flaming Ball + Whirlwind

2. What is the overall damage of that first second?

a. Type 1: 29 damage

Ability Name	Gesture	Damage	Activate (s)	Dur (s)	CD (s)	Base Dam	Base Time	Rate	DPS	1-sec
Basic Attack Combo	Auto Attack	3 / 6 / 9	0.50	0	0	18	1.5	40.00	12	9
Flaming Ball	Swipe	Line: 20	0.25	0	10	20	10.25	5.85	1.95	20
Jump Smash	D-Tap	AoE: 5	0.25	1	5	5	5.25	11.43	0.95	5
Whirlwind	Hold+drag	AoE: 5 per 0.5s	0.25	3	10	30	10.25	5.85	2.93	5
Whirlwind 2	Hold+drag	AoE: 10 + 5 per 0.5s + 5	0.25	3	10	45	10.25	5.85	4.39	15

b. Type 2: 25 damage

Ability Name	Gesture	Damage	Activate (s)	Dur (s)	CD (s)	Base Dam	Base Time	Rate	DPS	1-sec
Basic Attack Combo	Auto Attack	3 / 6 / 9	1.50	0	0	18	1.5	40.00	12.00	3
Flaming Ball	Swipe	Line: 20	0.25	0	10	20	10.25	5.85	1.95	20
Jump Smash	D-Tap	AoE: 5	0.25	1	5	5	5.25	11.43	0.95	5
Whirlwind	Hold+drag	AoE: 5 per 0.5s	0.25	3	10	30	10.25	5.85	2.93	5
Whirlwind 2	Hold+drag	AoE: 10 + 5 per 0.5s + 5	0.25	3	10	45	10.25	5.85	4.39	15

3. What sequence of abilities results in the highest average DPS?

a. The answer to this varies, depending on a single target or multiple targets. This information is based on 60 seconds of combat.

i. One or two targets (Sequence 2)

1. Flaming Ball, Whirlwind, Jump Smash, Basic Attack, Basic Attack, Basic Attack, Basic Attack, Jump Smash, Basic Attack, (REPEAT)

ii. Three or more targets (two possible sequences; Sequences 1 & 4)

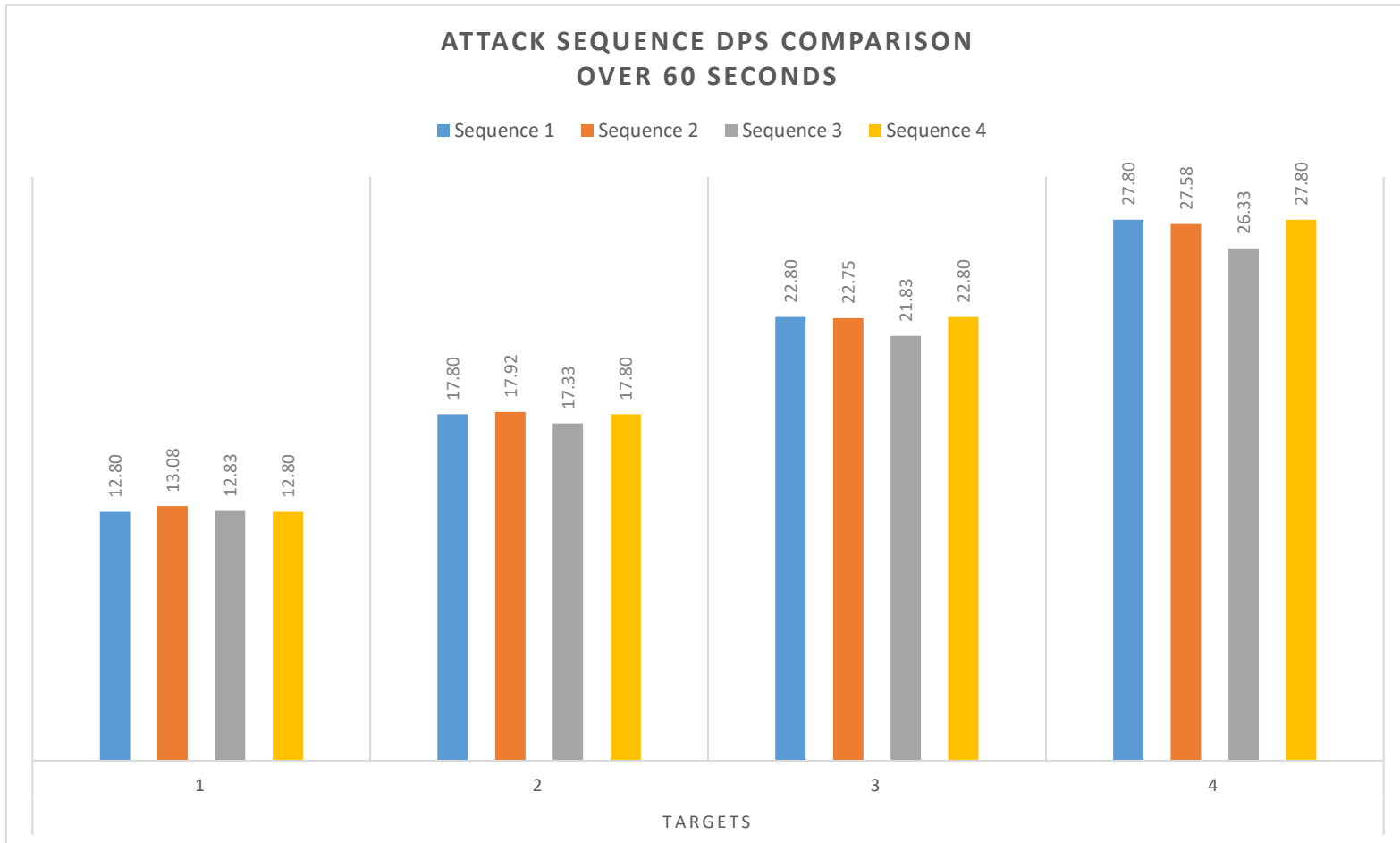
1. Sequence 1 - Flaming Ball, Whirlwind, Basic Attack, Basic Attack, Basic Attack, Basic Attack, Basic Attack, (REPEAT)

2. Sequence 4 - Whirlwind, Flaming Ball, Basic Attack, Basic Attack, Basic Attack, Basic Attack, Basic Attack, (REPEAT)

Note: I tested a "sequence 3," but it was always the lowest DPS.

4. *What is that DPS?*

- a. One or two targets – 13.08 DPS, 17.92 DPS
- b. Three or four targets -22.80 DPS, 27.80 DPS



5. *may acquire a skill which adds 10 damage to the initial swing of the Whirlwind (after activation) and an additional 5 damage "finisher" to the end of the duration*

a. What is the new sequence for highest average DPS?

- i. Single target - Flaming Ball, Whirlwind, Jump Smash, Basic Attack, Basic Attack, Basic Attack, Basic Attack, Jump Smash, Basic Attack, (REPEAT)
- ii. Two or more targets
 - 1. Sequence 1 - Flaming Ball, Whirlwind, Basic Attack, Basic Attack, Basic Attack, Basic Attack, Basic Attack, (REPEAT)
 - 2. Sequence 2 - Whirlwind, Flaming Ball, Basic Attack, Basic Attack, Basic Attack, Basic Attack, Basic Attack, (REPEAT)

b. *What is the new average DPS?*

- i. Single target – 14.50 DPS
- ii. Two, three, and four targets – 20.80 DPS, 27.30 DPS, 33.80 DPS

