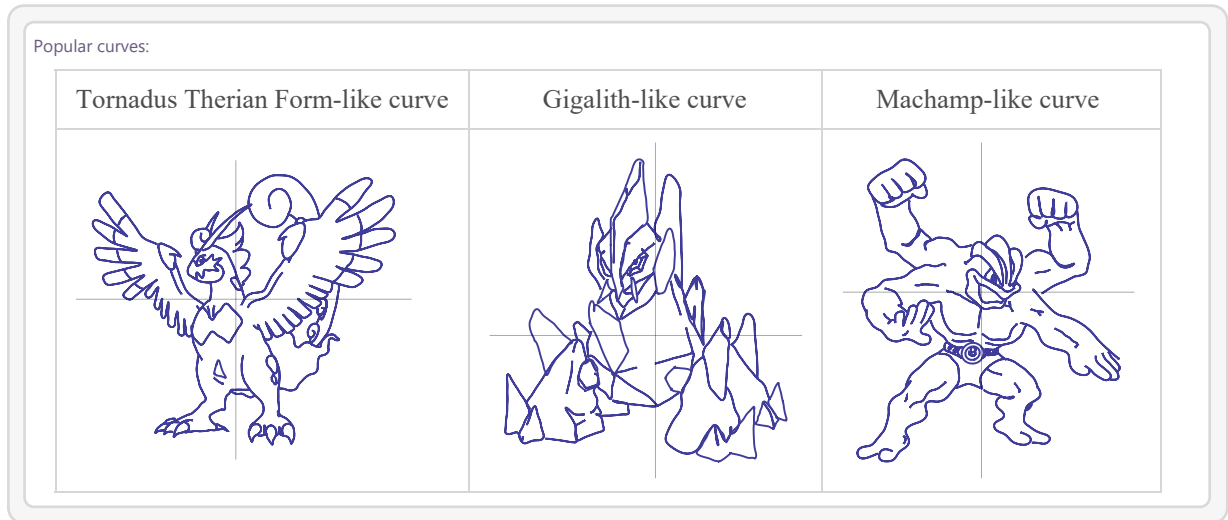


## Pokémath: Group Work 9

Name \_\_\_\_\_,



### Who to choose?

“I, Cy, leader of Team Cyclone, will stop at nothing until you dreadful trainers and your Pokémon® have been defeated! I will prove once and for all that I am the superior Pokémon® champion!”

We have received a threatening note from Team Cyclone’s leader, Cy. We need to start learning some battle strategies if we’re gonna go head to head with Team Cyclone! Let’s make sure we’re prepared for a battle. Cy likes to battle with a Tornadus. After lots of training and leveling, we have a powerful Gigalith and mighty Machamp to choose from. Who is a better matchup against Cy’s Tornadus?

	Tornadus	Gigalith	Machamp
Type	Flying	Rock	Fighting
Base Attack	238	226	234
Base Defense	189	201	159
Base HP	188	198	207
Attack IV	12	13	9
Defense IV	13	15	10
HP IV	11	14	9
Fast Attack	Gust	Smack Down	Counter
Fast Attack Type	Flying		
Fast Attack Power	16		
Fast Attack Turns	4		

1) Fill in the table above by looking up the fast moves using [https://bulbapedia.bulbagarden.net/wiki/List\\_of\\_moves\\_in\\_Pok%C3%A9mon\\_GO](https://bulbapedia.bulbagarden.net/wiki/List_of_moves_in_Pok%C3%A9mon_GO). Remember, this is a trainer battle, so make sure to use the “Power” and “Turns” columns under the “Trainer Battle” header.

2) Assume that all three Pokémon® are level 25 so they have a CPM of 0.667934.

a) Determine the true stats for Cy’s Tornadus. (true Attack, true Defense, true HP)

b) Determine the true stats for Gigalith. (true Attack, true Defense, true HP)

c) Determine the true stats for Machamp. (true Attack, true Defense, true HP)

3) Use the formula for damage.  $\text{Damage} = \left\lfloor \frac{1}{2} * \text{Power} * \frac{\text{Attack}}{\text{Defense}} * \text{Multiplier} \right\rfloor + 1$

a) Determine the damage per hit from Gigalith's smack down on Tornadus.

b) How many **hits** with smack down will it take to knock out Tornadus?

c) How many **turns** would it take to knock out Tornadus with Gigalith's smack down?

4) Use the formula for damage.  $\text{Damage} = \left\lfloor \frac{1}{2} * \text{Power} * \frac{\text{Attack}}{\text{Defense}} * \text{Multiplier} \right\rfloor + 1$

a) Determine the damage per hit from Machamp's counter on Tornadus.

b) How many **hits** with counter will it take to knock out Tornadus?

c) How many **turns** would it take to knock out Tornadus with Machamp's counter?

5) Which Pokémon® should you choose for your battle with Cy?

6) For the Pokémon® that you chose, how much HP will your Pokémon® have left once Tornadus has fainted? Hint, you will need to find the damage for Gust, then determine how many times Gust will hit.

7) If you chose the other Pokémon®, will you still win or will Cy defeat you?