
Pokémath: Group Work 1

Name _____, _____

Oh no! Pokémon® are going missing around the city. A sinister team is the suspect. Your instructor needs your help solving the case. With these group work activities, we will work to uncover who is behind this sinister scheme and take them down!

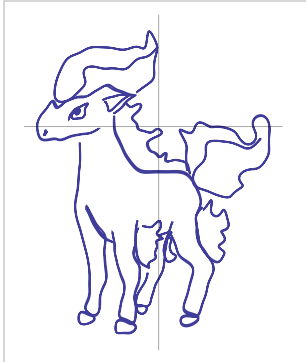
To combat this mysterious growing threat in the city, **you will each have a rival**. You and your rival will work together to complete group work activities, which will be used to further our investigation into this dangerous team. You will also challenge each other and help each other grow as trainers.

First, we need to sort through the Pokémon® we've caught recently to keep track of them in case they get stolen. Let's get started on some sets! Please feel free to **pull up the notes for the definitions**, I don't expect you to have them memorized!



Popular curve:

Ponyta-like curve



1) Fill in the chart below with your 8 most recently caught Pokémon® and this Ponyta I caught. If you have multiples of the same Pokémon® species, you should skip the repeats.

[illegible]

2) Consider the following sets:

$\{\text{Pokémon}^{\circ} \mid \text{it appears in your chart}\} = \mathcal{U}$ (This is our universal set for this assignment)

$\{\text{Pokémon}^{\circ} \text{ in } \mathcal{U} \mid \text{Fire type}\} = F$

$\{\text{Pokémon}^{\circ} \text{ in } \mathcal{U} \mid \text{CP is divisible by 4}\} = D$

Note how set \mathcal{U} is defined with “Pokémon[°]” on the left side of the bar with “appears in your chart” being a property of the Pokémon[°], while sets F and D have “Pokémon[°] in \mathcal{U} ” on the left of the bar with other properties on the right side. This shows the flexibility of Set Builder notation!

(a) Write set \mathcal{U} , F , and D using List notation:

$\mathcal{U} = \{\text{Ponyta},$

$F = \{\text{Ponyta},$

$D = \{\text{Ponyta},$

(b) Now try a union and intersection (remember you can look up the definition in the notes on ICON):

$F \cup D = \{ \text{_____},$

$F \cap D = \{ \text{_____},$

(c) How about a compliment?

$D^c = \{ \text{_____},$

3) Convert the following sentences into math notation using \mathcal{U} , D , F and symbols like \cup , \cap and c :

(a) “Pokémon[°] that you caught that are not fire-type”

(b) “Pokémon[°] that you caught that are fire-type and their CP is divisible by 4”

(c) “Pokémon[®] that you caught that are not fire-type but their CP is divisible by 4”