

Group Work

Why do we work in groups?

I have devoted a large amount of time for you to work in groups in this class. Here are some reasons I have done this.

- a) **It's fun!** Working with other people is enjoyable. Enjoyment is important because it motivates us on days we are feeling down, it inspires us to achieve things we would not attempt on our own, and it simply improves our lives! Many people have found working in supportive productive groups to be the best part of this class.
- b) **Our brains work differently when collaborating:** Working with others immediately stimulates us in ways we can not easily do on our own. It gets us talking instead of writing, it forces us to be clearer and to see things from other perspectives.
- c) **We learn by teaching and reflecting:** The best way to learn math is to try to explain it to someone else. In a productive group, every group member should have the opportunity to explain things, big and small, to their peers. It is also easier to ask question in a group if that group is nurturing and supportive.

Productive group work

Working with a group can be uplifting and amazingly fun. But you may have also found times when it felt tedious or forced. There is a difference between unproductive and productive group work. Effective group work does not happen randomly, it is a product of the choices we make.

In order to unlock the potential of a group we must actively direct ourselves towards supportive and productive behaviours. Two key ideas that can help with this are *group norms* and *group roles*.

Group norms

Here are a few group norms

Agree to make your group a “brave space.” We are all here to learn and being open to sharing productive struggle is key. Help each other promote growth mindsets.

Be active but also listen. Know when to step forward or step backward. Be intentional about giving each other chances to lead the conversation or write on the board.

Critique math, not people.

Ask each other for help.

Get to know your group mates and find ways to make each day fun.

Group Roles

Every group has members that serve specific roles. It makes no difference if that group is a class or a social group - those roles are still present. In some groups these roles can change seamlessly from one person to another but it can be helpful to make them explicit. This can also help members take on roles that they might not naturally fall into but that are beneficial to take on. Here are six roles that I find helpful to think about.

- a) **Leader:** A leader makes sure that everyone understands the instructions, helps keep the group on task and makes sure the group makes clear decisions.
- b) **Facilitator:** Similar to the leader but with more focus on the process than with getting things going. Makes sure every person in the group has their hands on the materials and offers opinions/thoughts; asks questions to get every person involved.
- c) **Questioner:** Ask questions about conclusions your group is coming to; tries to find alternative approaches to a problems. When you are stuck asks questions to get unstuck.
- d) **Clarifier:** When the group is confused the clarifier tries to summarize the confusion. When a solution is being formed the clarifier attempts to make sure everyone understands the solution.
- e) **Reflector:** Reflection is a key part of learning. When the group finishes a problem or discussion a reflector can help remind the group how that problem relates to previous work. Or they might reflect on what went well that day or what challenges you overcame.
- f) **Encourager:** Encouragement can be as simple as appreciating your group mates and making the process more enjoyable. It can be as complex and being aware of growth mindsets and how you and your group mates are improving. This role might seem different than the rest but it is essential.

Note: Even when taking on the above roles it is possible, and expected, that everyone to be equally engaged with the material. The above roles are more about how group members are communicating and cooperating with one another and less about how much math you are doing.

Reflection questions

1. When reading the list of group norms above are there any that resonate with you? Any that surprised you? Any that you want to add?
2. What group roles do you think you tend to fall into naturally? (on my list or not)
3. What role do you find challenging but that you think would benefit you to try?
4. What do you think the most challenging part of working productively in a group will be? Any ideas about how to overcome that challenge?