

# BROKEN SQUARES EXERCISE

## Instructor Activities

**Discussion:** Lead into this exercise with a discussion of the meaning of cooperation. The discussion should lead to suggestions by the group of what is essential in successful group cooperation. List suggestions on the board. Basic suggestions you may want to bring out are:

- Each individual must understand the total problem.
- Each individual should understand how (s)he can contribute toward solving the problem.
- Each individual should be aware of the potential contributions of themselves as individuals.
- There is a need to recognize the problems of other individuals, in order to aid them in making their maximum contribution.

**Arrangements:** The Broken Squares exercise is used to test group cooperation skills. It requires 5 persons for each group. Ask if anyone has done this before, if so, make them an observer. Use the remaining persons as observers. If you don't have enough students to give each team an observer the facilitator should function as an observer also.

Ask the groups to clear their table and make sure each team is situated around the same table. Try to arrange tables so as to inhibit groups from observing activities of the others.

Have one instructor take aside the observers and brief them with the "Instructions to the Observer" sheet. While this is happening the other instructor can hand out the puzzle envelopes, one to each group.

Read the "Instructions to the Group" out loud, then ask if the instructions are clear to everyone. Answer questions. Inform the groups they will have 15 minutes to complete the exercise.

Start the timer. Monitor the groups during the exercise to enforce the rules. Help groups that are having problems by identifying correctly completed puzzles after 10 minutes.

When all the groups have completed the task, engage the groups in a discussion of the experience. Discussion should focus on feelings more than merely relating experiences and general observations. You may want the groups to relate this experience with their "back home" situations. Pick a group to start with and ask the observer for feedback. Refer them to the instruction sheet.

# BROKEN SQUARES EXERCISE

## INSTRUCTIONS TO THE OBSERVER

Your job is part observer and part judge. Make sure each participant observes the rules:

### **Judge:**

1. No talking, pointing, or any other kind of communicating among the five people in your group.
2. Participants may give pieces to other participants but may NOT take pieces from other members.
3. Participants may not simply throw their pieces into the center for others to take; they have to give the pieces directly to one individual.
4. It is permissible for a member to give away all the pieces to his/her puzzle, even if (s)he has already formed a square.

Do your best to strictly enforce these rules.

### **Observer:**

As an observer, you may want to look for some of the following:

1. Who is willing to give away pieces of the puzzle?
2. Did anyone finish their puzzle and then somewhat divorce themselves from the struggles of the rest of the group?
3. Is there anyone who continually struggles with his/her pieces but yet is unwilling to give any or all of them away?
4. How many people are actively engaged in mentally putting the pieces together?
5. Periodically check the level of frustration and anxiety-who is pulling their hair out?
6. Was there any critical turning point at which time the group began to cooperate?
7. Did anyone try to violate the rules by talking or pointing as a means of helping fellow members solve their puzzle?

**Closure:** Once feedback has been completed, have the students return all puzzle pieces to proper envelopes. Collect all puzzle packets. Then show transparency (below) to close the exercise.

## **BROKEN SQUARES EXERCISE**

### **INSTRUCTIONS TO THE GROUP**

I am passing out five envelopes, one to each group. Each envelope contains pieces of cardboard for forming squares. When I give you the signal to begin, someone pass out the small envelopes containing puzzle pieces. The tasking of your group is to form five squares of equal size. The task will not be completed until each individual has before them a perfect square of the same size as that held by others. The squares measure 6" x 6".

Specific limitations are imposed upon your group during this exercise:

1. No member may speak.
2. No member may ask another member for a puzzle piece or in any way signal that another person is to give them a puzzle piece.
3. Members, may however, give puzzle pieces to other members.
4. Letters on puzzle pieces are irrelevant and pieces may need to be turned over.

Are the instructions clear?

### **EXERCISE OBJECTIVES**

The objectives of this exercise were to:

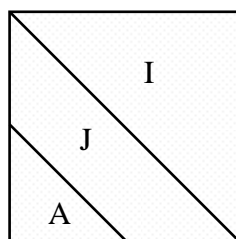
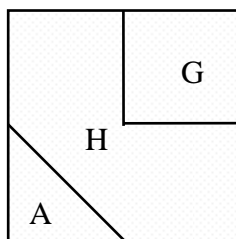
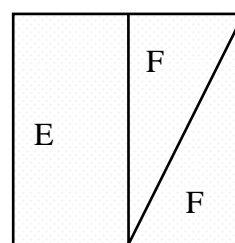
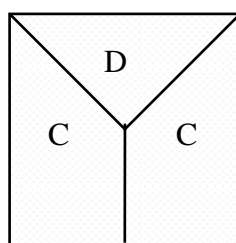
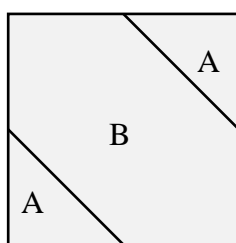
- Understand certain aspects of cooperation in solving a group problem.
- Recognize some of their own behaviors that may contribute toward or obstruct the solving of a group problem.
- Appreciate the importance of open communication of all types (e.g., body language)
- Appreciate the difficulty that arises from lack of communications.
- Understand the frustration felt by a worker with a solution that they cannot communicate to management.
- Recognize the differences in individual abilities to deal with the unstructured and abstract.

# BROKEN SQUARE EXERCISE

## DIRECTIONS FOR MAKING SQUARE PUZZLES

A set of five envelopes containing pieces of cardboard have been cut into different patterns and when properly arranged will form five squares of equal size. One set should be provided for each group of five persons.

To prepare a set, cut out five cardboard squares of equal size, approximately 6 x 6 inches. Place the squares in a row and mark them as below, penciling the letters a, b, c, etc., lightly, so that they can later be erased.



The lines should be so drawn that when cut out, all pieces marked a will be exactly the same size, all pieces marked c of the same size, etc. By using multiples of 3 inches, several combinations will be possible to enable participants to form one or two squares, but only one combination is possible to form five squares 6 x 6 inches.

## ENVELOPE MARKING

Mark each of the five envelopes as shown below. Distribute the cardboard pieces in the five envelopes according to the labels.

Pieces	<u>IHE</u>	<u>AAAC</u>	<u>AJ</u>	<u>DF</u>	<u>GBFC</u>
Envelopes	1	2	3	4	5