

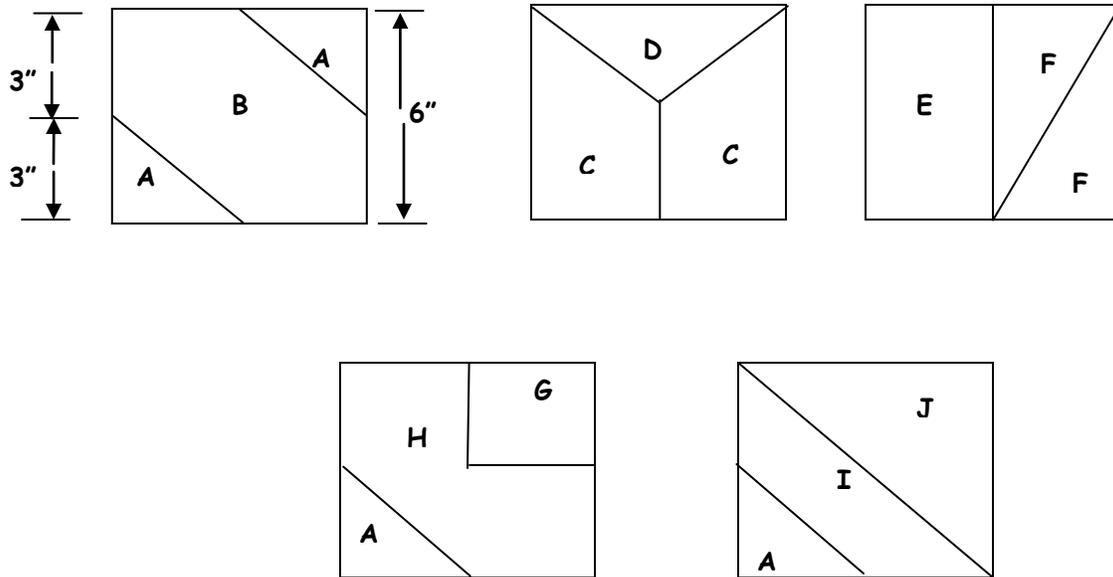
Broken Squares

Teacher Instructions:

1. Make a set of broken squares.

A set consists of five envelopes containing pieces of cardboard cut into different patterns which, 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, each exactly 6" x 6". Place the squares in a row and mark them as below, pencilling the letters lightly so they can be erased.



The lines should be drawn in a way that, when the pieces are cut out, those marked A will be exactly the same size, all pieces marked C the same size, etc. Several combinations are possible that will form one or two squares, but only one combination will form all five squares, each 6" x 6". After drawing the lines on the squares and labelling the sections with letters, cut each square along the lines into smaller pieces to make the parts of the puzzle.

Label the five envelopes 1, 2, 3, 4, and 5. Distribute the cardboard pieces into the five envelopes as follows: envelope 1 has pieces I, H, E; 2 has A, A, A, C; 3 has A, J; 4 has D, F; and 5 has G, B, F, C.

Erase the pencilled letter from each piece and write, instead, the number of the envelope it is in. This makes it easy to return the pieces to the proper envelope, for subsequent use, after a group has completed the task.

Each set may be made from a different colour of cardboard.

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2. Divide the class into groups of five students.

If there are extra participants ask them to assist you in distributing puzzle envelopes and making observations of one small group.

3. Give one set of five envelopes to each group of students.

Each participant is responsible for one envelope but cannot open it until all of the instructions have been given and groups are directed to begin.

4. Explain the activity to the class.

Goal: to re-assemble the five squares before the other teams do. The task is completed when each team member has completed his/her square.

Rules:

- You are not allowed to talk or give hand signals.
- You cannot take a piece from any of your team members, but you can give one piece at a time to any of your team members.
- You cannot place the piece in a square for another team member.
- If your team completes the task, remain at your work station and silently observe the other teams.

Ask observers to silently watch one team and be prepared to report what they observed.

5. Tell the class to begin.

Participants may need to be reminded about not giving verbal instructions and hand gestures during the exercise.

The activity will end when at least three teams have completed the task.

6. Discuss the process:

Ask the observers to report their observations. Call upon participants' observations.