

THE STRING GAME

Materials

Prepare a chart showing all of the attributes to be used in the game and prepare a card for each attribute to form a "face-down" set. Prepare game pieces, one

for each of the numbers that are listed below. Put magnetic material or loops of masking tape on the pieces and the string cards so that they will adhere to the board.

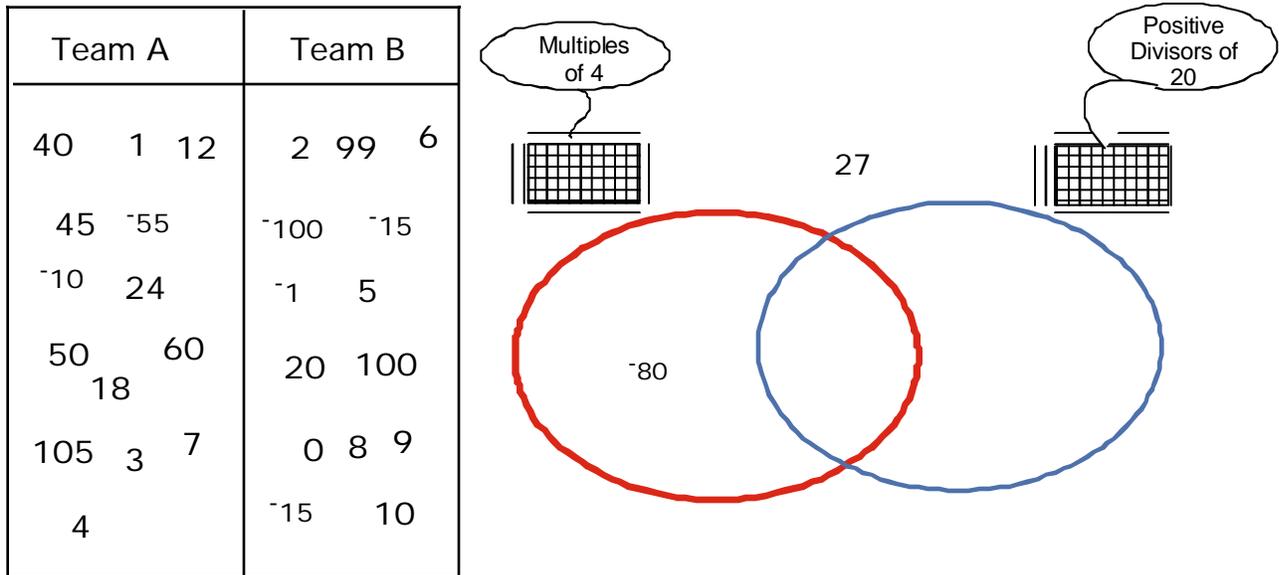
Game Pieces

100	80	55	15	10	15
1	0	1	2	3	4
5	6	7	8	9	10
12	18	20	24	27	40
45	50	60	99	100	105

Multiples of 2	Multiples of 3	Multiples of 4	Multiples of 5
Multiples of 10	Positive Divisors of 12	Positive Divisors of 18	Positive Divisors of 20
Positive Divisors of 24	Positive Divisors of 27	Larger than 50	Larger than 10
Smaller than 50	Smaller than 10	Odd Numbers	Positive Prime Numbers

Preparation

Draw two (or three) large overlapping strings on the board using two (or three) different colors. Next to each string attach a string card face-down. Place an even number (two or four) of the game pieces correctly in the string picture to provide a basis (other than guessing) for plays early in the game. Divide the rest of the game pieces evenly into two sets, one for each of the competing teams. The illustration below shows a sample set-up for a game; bubbles indicate the hidden labels.



Object of the game

Each team tries to place its game pieces correctly in the string picture according to the face-down string cards. The winning team is the one that identifies the facedown cards correctly after playing according to the rules.

Rules of the game

- 1) The students play the game in silence. Each student should have the opportunity to analyze the game alone. Infringement of this rule by anyone is penalized by the talker's team losing its next turn.
- 2) The teams alternate and the members take turns within each team. A player comes to the board and selects a piece from the team's collection to place in one of the regions of the string picture.

3) You are the judge. If the piece is correctly placed, say "yes". The piece remains on the string picture and the player immediately has a second turn (no player may have more than two consecutive turns) . If the* piece is in correctly placed, say "no". The player returns the piece to the team's unplayed collection and play passes to the other team. As an aid in judging, prepare a crib-sheet showing the correct position of each game piece. if at any time you discover that you have made an error, say so immediately and rectify the mistake. Either move -an incorrectly placed piece whose position you had approved to its correct region or replace on the string picture a correctly placed piece that-you-had-rejected because you had disapproved its position...

4) When a team has correctly placed all of its pieces, the player who placed the last piece may thereupon attempt to Identify each of the string cards. There are two levels of acceptability dependent on the experience of the students In playing the game. In the first case, accept and verify a correct Identification. of a string and continue the game until the other, string or strings are identified. In the second stage, require all of the strings be identified correctly at once.

If a team has exhausted its stock, of game pieces and the strings have not been identified, then the team continues on its turn to attempt to identify the -strings, while the other team works to place its game pieces.

Analysis Sheets on next Page.

RED	BLUE		RED	BLUE
Multiples of 2	Multiples of 2		Multiples of 2	Multiples of 2
Multiples of 3	Multiples of 3		Multiples of 3	Multiples of 3
Multiples of 4	Multiples of 4		Multiples of 4	Multiples of 4
Multiples of 5	Multiples of 5		Multiples of 5	Multiples of 5
Multiples of 10	Multiples of 10		Multiples of 10	Multiples of 10
Odd Numbers	Odd Numbers		Odd Numbers	Odd Numbers
Positive Prime Numbers	Positive Prime Numbers		Positive Prime Numbers	Positive Prime Numbers
Larger than 50	Larger than 50		Larger than 50	Larger than 50
Smaller than 50	Smaller than 50		Smaller than 50	Smaller than 50
Larger than -10	Larger than -10		Larger than -10	Larger than -10
Smaller than -10	Smaller than -10		Smaller than -10	Smaller than -10
Positive Divisors of 12	Positive Divisors of 12		Positive Divisors of 12	Positive Divisors of 12
Positive Divisors of 18	Positive Divisors of 18		Positive Divisors of 18	Positive Divisors of 18
Positive Divisors of 20	Positive Divisors of 20		Positive Divisors of 20	Positive Divisors of 20
Positive Divisors of 24	Positive Divisors of 24		Positive Divisors of 24	Positive Divisors of 24
Positive Divisors of 27	Positive Divisors of 27		Positive Divisors of 27	Positive Divisors of 27