



# CREATIVE MATHS

A WORLD OF MATHEMATICIANS

## INTRODUCING MULTY FACTY

### MULTY FACTY

Multy Facty is a game to help with learning multiplication facts. Multy Facty uses arrays as a visual representation of the facts.

Multy Facty has a simple game play. This document provides a suggestion for introducing the game to a class.

### EQUIPMENT

- One pack of Multy Facty cards for each group of four students

### INTRODUCING THE CARDS

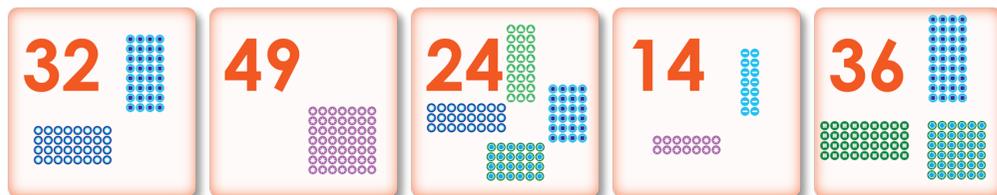
Before starting, removing the Action Cards from the packs. Action Cards have a blue back and red face. Action Cards provide an extra dimension to the game once students are confident playing.

Split each pack into two decks: the Multiple Deck (gold backs) and the Factor Deck (blue backs).

Organise the students into groups of four and give each group a Multiple Deck.

### MULTIPLE CARDS

Give the groups time to examine the cards and discuss what they see. Ask them to guess what the various things on the cards are and how they are related. Have the groups feedback their guesses and reasoning.



Each card shows a number with one to four arrays. Each array represents a multiplication fact. The number of symbols in each array is the number displayed.

The numbers shown on multiple cards all appear within the 2 to 9 times table. For example, there is no card showing 13 and no card showing 26. As well as knowing multiplication facts, it is important to recognise which are the special numbers that appear within the times table. This can help with later mathematics such as division, factorising and fractions.

Tell the students that these cards make up the Multiples Deck. You may need to introduce the term 'multiple'. A multiple is the result of multiplying one number by another. For example, 6 is a multiple of 3 since  $6 = 3 \times 2$ .

### FACTOR CARDS

Factor Cards are used to build the arrays shown on the Multiple Cards. The factor symbol matches the symbol used in the array. Give each group a Factor Deck. You may need to introduce the term 'factor'. A factor is a number that multiplies another to give a multiple. For example, 3 and 2 are both factors of 6.

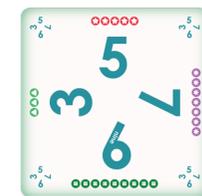
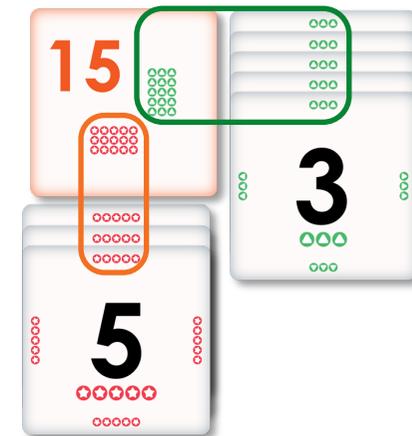
Demonstrate how to build the arrays for the 15 Multiple card.

Align three Factor 5 cards so the rows at the top form a 3-by-5 array. The array matches the one on the bottom of the 15 Multiple card.

Align five Factor 3 cards so the rows at the top form a 5-by-3 array. The array matches the one on the right of the 15 Multiple Card.

Have students choose a Multiple Card and form one of the arrays shown. Groups will have to share Factor Cards, so it is best if they choose a different Factor Card for each array.

For some arrays Wild Cards may be needed. Wild Cards can be turned to show one of four different factors at the top.



### THE GAME

Multy Facty involves building arrays to claim Multiple Cards.

Either run a demonstration game or show the Multy Facty video: [CreativeMaths.net/videos/video-game-mf](https://www.creativemaths.net/videos/video-game-mf)

## DEMONSTRATION GAME

Have one group play a demonstration game with everyone else watching. Just one round is played for the demonstration game.

Shuffle the Multiple Deck and place 5 Multiple cards face up in a row (the Multiple Row). Place the remaining cards in a face down pile.

Shuffle the Factor Deck and deal 7 cards to each player. Place the remaining cards in a face down pile for players to draw from.

For the demonstration game, players show their cards to everyone on their turn. Initially, explain all of the moves a player can make with the cards they have. Later have the player or other students suggest possible moves.

On each turn a player places one factor card or, if they cannot, draws another card for their hand.

Over the first few turns be sure to point out the following:

1. Factor Cards are placed below a Multiple Card to build an array.
2. The first Factor Card placed below any Multiple Card must match the symbol on one its arrays.
3. The second and later Factor Cards placed below a Multiple Card must match the first one placed.
4. To place a Wild Card, turn the card to show the chosen factor at the top.
5. Multiple Cards are claimed by the player completing an array below the Multiple Card.
6. Once a Multiple Card is claimed by a player, they may discard a card from their hand, or force the remaining players to draw another card.
7. Claimed Multiple Cards are kept for scoring.

The first player to use all of their cards wins a round. They claim an extra Multiple Card from the Multiple Row as a bonus.

Show how the next round is begun. The winner discards the cards remaining in the Multiple Row and deals a new row of five. They collect all Factor Cards, shuffle them and deal new hands. The person to their left would start.

End the demonstration before starting the new round.

If the first round takes too long, sort through the Factor Card pile, adding extra cards to the arrays so the game will end in a few turns.

## Introducing Multy Facty

## GROUP GAMES

Once the demonstration game is finished. Groups play their own games. The demonstration group can visit other groups to help them get started.

You can order Multy Facty cards at [CreativeMaths.net](http://CreativeMaths.net)

Where to next? More ideas at [CreativeMaths.net](http://CreativeMaths.net) – and do give us feedback as to what worked for you.

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