Teacher Notes

- Fractions
- Representations
- Graphing

DANCING FRACTIONS – GRAPHICAL REPRESENTATIONS

TOPIC: Representing fractions, numerator, denominator, and understanding.

- **Grade Level** /Activating Prior Knowledge

  3rd grade and beyond /natural numbers

- **Learning Objective**

  To teach understanding of fractions through dance design, graphing representations, and physical movement. Comparison of various dances develops understanding of different representations of fractions.

✓ **Materials (per student)**

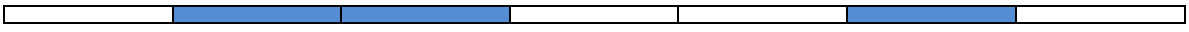
- ✓ The student worksheets for the graphing
- ✓ Several different colored highlighters

- **Lesson Plan**

1. Start with a dance that has regular 7 steps, no figures, no special movements. Show students the seven steps, you may ask one of them to act it out for the rest of the class. Draw the diagram as above to represent what happened.

2. Now ask students to design a dance that will have 3 special steps with some figures. For example show them a picture as below, which indicates the special steps. Ask students to act this dance out.

3. Using a **blue** highlighter represent the special moves on the bar graph below. The colored bars represent the special moves. This means three special steps out of seven. We represent them as a fraction 3/7. Number of all steps is represented by denominator, number of special steps by the numerator.



4. Ask students for other examples of 3/7 dance and represent them on the bars. Discuss with students the similarities of these dances. Explain the notion of equivalent fractions.

5. Let students work on their worksheets. Ask them to act out out their dances to a friend. Ask them compare their dances and represent them as fractions.

📖 **Vocabulary:** numerator, denominator, fractions, equivalent fractions, graphical representations.

** Your comments would be appreciated. Please send to suejm2002@hotmail.com. Thank you! **

TEST: ON GRAPHICAL REPRESENTION OF FRACTIONS - TEACHER's SOLUTIONS

1. Write fractions that represent the shaded part of the graphs below

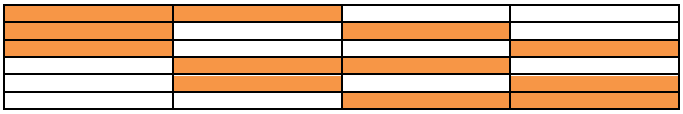
a)

b)

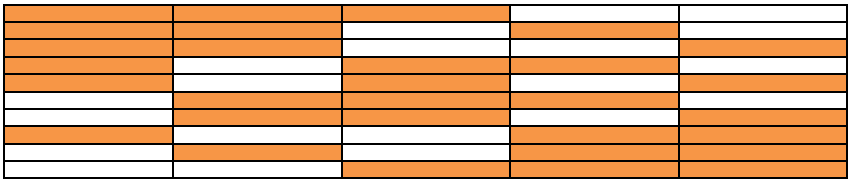
c)

a)____ 2/4 _____ b) ___ 3/6 _____ c) _____ 2/5 _____

2. Draw different representations for a fraction 2/4. (NOTE: Rows could be in different order!)



3. Find 10 different dances representing a fraction 3/5. (NOTE: Rows could be in different order!)



Activity

- Fractions
- Representations
- Graphing

DANCING FRACTIONS – VARIOUS GRAPHICAL REPRESENTATIONS

Materials you should have

✓ Colored highlighters.

Activity

1. Design different dances with the total of 8 steps and 5 special steps in each dance.

a) Mark special steps by coloring the corresponding boxes with a highlighter in the graph bars below.

b) Dance your steps for a friend. Watch your friend dance. Copy below two dances of your friend that are different than yours.

c) Write a fraction that represents all these dances? _____

On the first bar graph below design a dance that has all special moves at the beginning. On the second bar design a dance that has all special steps at the end of the dance.

2. Color the bar graphs below to show all possible 5-step dances with 4 special figures.

Challenge: Find 10 different dances representing a fraction 3/5.

TEST: ON GRAPHICAL REPRESENTION OF FRACTIONS

1. Write fractions that represent the shaded part of the graphs below

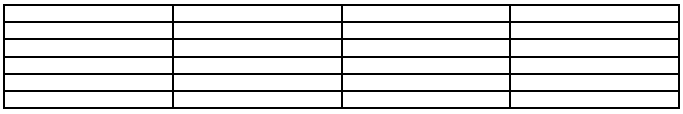
a)

b)

c)

a)_____ b) _____ c) _____

2. Draw 6 different representations for a fraction 2/4.



3. Find 10 different dances representing a fraction 3/5.