

## PIZZA, PIZZA

### Performance Standard 6A.C

Determine fractional parts of a whole pizza, build fractional parts using fraction sticks, and generate equivalent forms of fractions accordingly:

- *Mathematical knowledge*: determine how to divide pizza for 2, 4 and 8 people and make a drawing of the pizzas showing the fractional parts; use the Fraction models to build fractions,
- *Strategic knowledge*: use appropriate strategies and steps for dividing whole units into fractional parts, and
- *Explanation*: explain completely and clearly what was done and why it was done: explain why the divided pizza provides equivalent amounts of pizza for each person; explain why each step applied was important.

### Procedures

1. *In order to demonstrate knowledge and use of numbers and their representations in a broad range of theoretical and practical settings (6A)* students should experience sufficient learning opportunities to develop the following:
  - Judge the size of fractions using models, benchmarks, and equivalent forms.
  - Represent, order, label, and compare familiar fractions.
  - Recognize and generate equivalent forms of familiar fractions.
2. Have students review the task to be completed and how it will be evaluated. Provide each student a copy of the “Pizza, Pizza” recording sheet (2 pages). Show student how to use Fraction Stax.
3. For Part A, ask students to divide each of 3 pizzas evenly, to indicate what each person will get and explain why.
4. For Part B, ask students to use Fraction models to build the fractions  $\frac{1}{3}$ ,  $\frac{3}{9}$ ,  $\frac{4}{12}$ . After building the fractions, ask students to write anything they learned about the building process.
5. For Part C, ask students to write an explanation of how each part of the assessment task was completed and why particular methods worked for them.
6. Evaluate each student’s work using the rubric as follows and use the scoring guide on the rubric to determine the performance level.
  - 4 = all questions answered correctly; all fractions built correctly; explanation of equivalent fractions is written accurately. This last part should be derived from building equivalent fractions with the Fraction Stax.
  - 3 = recording and/or building the fractions included minor errors; written essay about equivalent fractions was incomplete; written explanation contained what was done and why methods were followed but parts were unclear.
  - 2 = recording and building the fractions included minor errors; written explanation may include what was done to complete each part of the task and why they followed a particular method, but not both.
  - 1 = all parts of completing the task included major errors; written explanation of what was done did not match the procedures followed.

### Examples of Student Work follow

### Time Requirements

- One class period

### Resources

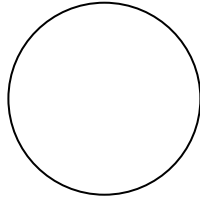
- Copies of “Pizza, Pizza” recording sheets
- One Fraction Model set representing thirds, ninths and twelfths.
- Mathematics Rubric

NAME \_\_\_\_\_ DATE \_\_\_\_\_

### PIZZA, PIZZA – Part A

**Part A:** Divide each pizza evenly according to the following directions:

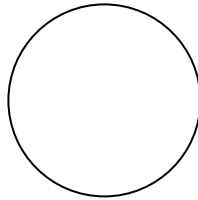
1. Two friends want to share a pizza. How much will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get \_\_\_\_\_ of the pizza. I know this because \_\_\_\_\_

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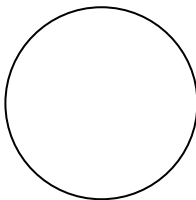
2. Four friends want to share a pizza. How much of the pizza will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get \_\_\_\_\_ of the pizza. I know this because \_\_\_\_\_

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3. Eight friends want to share a pizza. How much of the pizza will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get \_\_\_\_\_ of the pizza. I know this because \_\_\_\_\_

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NAME \_\_\_\_\_ DATE \_\_\_\_\_

**PIZZA, PIZZA – Parts B & C**

**Part B:** Using the Fraction models, build each of the following fractions:

$1/3$

$3/9$

$4/12$

Write what you learned about building each of the fractions.

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**Part C:** Write an explanation of what you did to complete parts A and B. Why was each step important to your work?

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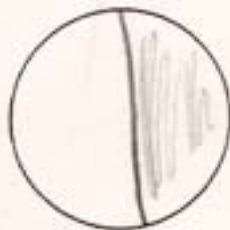
NAME \_\_\_\_\_

DATE 3-13-02

### PIZZA, PIZZA – Part A

**Part A:** Divide each pizza evenly according to the following directions:

1. Two friends want to share a pizza. How much will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get  $\frac{1}{2}$  of the pizza. I know this because there is 2 people so you cut it into 2 pieces and each person gets one piece.

2. Four friends want to share a pizza. How much of the pizza will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get  $\frac{1}{4}$  of the pizza. I know this because there is 4 people so you cut it into 4 pieces and each person gets one piece.

3. Eight friends want to share a pizza. How much of the pizza will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get  $\frac{1}{8}$  of the pizza. I know this because there is 8 people so you cut it into 8 pieces and each person gets one piece.

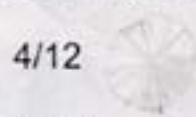
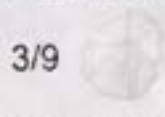
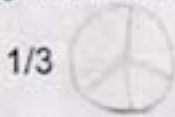
NAME \_\_\_\_\_

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3-13-02

PIZZA, PIZZA – Parts B & C

Part B: Using the Fraction models, build each of the following fractions:



Write what you learned about building each of the fractions.

I learned that 1/3, 3/9, 4/12 are all equivalent fractions.

Part C: Write an explanation of what you did to complete parts A and B. Why was each step important to your work?

For part A, I divided the shapes into the parts the directions told me to and it said that each person should get an equal amount so each person got one piece and then I wrote the fraction to it. For example 1/4. For part B, I drew the fractions it told me to and looked at them. Then I saw that they were all equivalent.

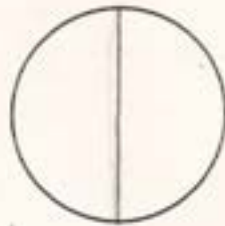
NAME \_\_\_\_\_

DATE 3-13-02

### PIZZA, PIZZA – Part A

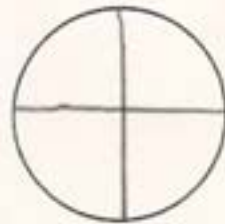
**Part A:** Divide each pizza evenly according to the following directions:

1. Two friends want to share a pizza. How much will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get  $\frac{1}{2}$  of the pizza. I know this because 2 people  
wanted a pizza, I divided it into 2 peices.

2. Four friends want to share a pizza. How much of the pizza will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get  $\frac{1}{4}$  of the pizza. I know this because 4 people  
wanted a pizza, I divided it into 4 even peices.

3. Eight friends want to share a pizza. How much of the pizza will each friend get? Show how to divide the pizza so that each friend gets the same amount.



Each friend will get  $\frac{1}{8}$  of the pizza. I know this because 8 people  
wanted a pizza, I divided it into 8 peices.

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## PIZZA, PIZZA – Parts B &amp; C

Part B: Using the Fraction models, build each of the following fractions:

 $1/3$  $3/9$  $4/12$ 

Write what you learned about building each of the fractions.

These fractions are equivalent, that means even though the fractions are different, they all equill  $1/3$  or  $3/9$  or  $4/12$ . I knew I where equill because the pictures were all the same.

Part C: Write an explanation of what you did to complete parts A and B. Why was each step important to your work?

In part A I divided the pizza into the peices it needed to be. Also I knew the answers because I remembered that how many people there are is what the fraction is. In part B, I should pictures of the fractions. Then, I wrote what I learned. I did this because I had to show what  $\frac{1}{3}$  look like and  $\frac{3}{9}$  and  $\frac{4}{12}$ .